

HP StorageWorks

XPath OS 7.4.x system error messages reference guide

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XPath OS 7.4.x system error messages reference guide

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About this guide

This document provides information to help you administer, operate, maintain, and troubleshoot HP StorageWorks Multi-protocol Routers (MP Routers) within your SAN.

Intended audience

This guide is intended for system administrators and technicians who are experienced with the following:

- HP StorageWorks Fibre Channel Storage Area Network (SAN) switches
- XPath Operating System (OS) 7.4.x or earlier

Related documentation

Documentation, including white papers and best practices documents, is available on the HP web site:

<http://www.hp.com/country/us/eng/prodserv/storage.html>

To access XPath OS 7.4.x documents:

1. Locate the **IT storage products** section of the web page.
2. Under **Networked storage**, click the **SAN Infrastructure** subsection.
3. From the **SAN Infrastructure** web page, locate the **SAN Infrastructure products** section.
4. Click **Multi-protocol Routers and Gateways**.
5. To access XPath OS 7.4.x documents (such as this document), click **B-Series Multi-Protocol Router**.
The **HP StorageWorks B-Series Multi-Protocol Router** overview page opens.
6. Go to the **Product Information** section, located on the right side of the web page.
7. Click **Technical documentation**.
8. Follow the onscreen instructions to download XPath OS 7.4.x documents.


Document conventions and symbols


Table 1 Document conventions

Convention	Element
Medium blue text: Figure 1	Cross-reference links and e-mail addresses
Medium blue, underlined text (http://www.hp.com)	Web site addresses
Bold font	<ul style="list-style-type: none">• Key names• Text typed into a GUI element, such as into a box• GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes
<i>Italics font</i>	Text emphasis
Monospace font	<ul style="list-style-type: none">• File and directory names• System output• Code• Text typed at the command line
<i>Monospace, italic font</i>	<ul style="list-style-type: none">• Code variables• Command-line variables
Monospace, bold font	Emphasis of file and directory names, system output, code, and text typed at the command line


 **WARNING!** Indicates that failure to follow directions could result in bodily harm or death.

 **CAUTION:** Indicates that failure to follow directions could result in damage to equipment or data.

 **IMPORTANT:** Provides clarifying information or specific instructions.

 **NOTE:** Provides additional information.

Rack stability

 **WARNING!** To reduce the risk of personal injury or damage to equipment:

- Extend leveling jacks to the floor.
 - Ensure that the full weight of the rack rests on the leveling jacks.
 - Install stabilizing feet on the rack.
 - In multiple-rack installations, secure racks together.
 - Extend only one rack component at a time. Racks may become unstable if more than one component is extended.
-

HP technical support

Telephone numbers for worldwide technical support are listed on the HP support web site:

<http://www.hp.com/support/>.

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

For continuous quality improvement, calls may be recorded or monitored.

HP strongly recommends that customers sign up online using the Subscriber's choice web site:

<http://www.hp.com/go/e-updates>.

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest versions of drivers, and firmware documentation updates as well as instant access to numerous other product resources.
- After signing up, you can quickly locate your products by selecting **Business support** and then **Storage** under Product Category.

HP-authorized reseller

For the name of your nearest HP-authorized reseller:

- In the United States, call 1-800-282-6672.
- Elsewhere, visit the HP web site: <http://www.hp.com>. Then click **Contact HP** to find locations and telephone numbers.

Helpful web sites

For other product information, see the following HP web sites:

- <http://www.hp.com>
- <http://www.hp.com/go/storage>
- <http://www.hp.com/support/>
- <http://www.docs.hp.com>

1 Introduction to system error messages

This chapter provides information on the XPath OS error log and event log. The following topics are discussed:

- [XPath OS logging](#) next
- [Message severity levels](#), page 14
- [These procedures explain error log management.](#), page 15
- [Sample error log message](#), page 16
- [Clearing the error log](#), page 16
- [Event log tasks](#), page 16
- [Configuring the syslog daemon](#), page 18
- [Module descriptions](#), page 20

XPath OS logging

There are three log file frameworks in the XPath OS:

- **Error log:** Viewed using the `errShow` command. This log displays system daemon errors, in addition to all events from the event log.
- **Event log:** Viewed using the `eventShow` command. This log displays only events.
- **Port log:** Viewed using the `portLogShow` or `portLogDump` commands. This log displays port information.

HP recommends that for most MP Router troubleshooting tasks you refer to the error log using the `errShow` command. The XPath OS error log is formatted to match the Fabric OS error message format, and provides a complete set of system messages. The event log provides a limited set of event messages, and does not display errors from the firmware subsystems.

Error log

View this log using the `errShow` command. It displays system errors, such as faulty or failing daemon processes in the firmware, as well all the events listed in the event log.

This document focuses on the error log because it is an aggregate of system daemon errors and all the events listed in the event log.

System error messages are saved in the `/var/log/messages` directory. Once the message file has reached 512 K, the XPath OS archives the log with the file name `messages.0.gz`, and creates a new error log. There can be a total of five archived files on the system, named `messages.0.gz` through `messages.4.gz`.

As each archive file is added, XPath OS rearranges the files so that `messages.0.gz` is the newest archive and `messages.4.gz` is the oldest. Once the maximum of five archive files is reached, the oldest archive file is replaced with any new archive file.

The `errShow` command displays only the contents of the current error log and does not display archived messages. [Table 2](#) describes the error log commands.

Table 2 Managing the error log

Command	Description
<code>errShow</code>	Displays the contents of the error log.
<code>errClear</code>	Clears the contents of the error log.

Event log

View this log using the `eventShow` command. It displays system events, such as port up, port down, link events, fabric segmentations, and logins. Events from this log are dumped into the error log as well. Use the `eventSeverityShow` command to view the possible events in the event log, as well as the default severity levels for those events.

In the XPath OS, only specified event messages (persistent events) are saved in nonvolatile memory and restored to the event log after a reboot or power cycle.

Use the `eventActionShow` command to view the events that are saved to nonvolatile memory. The events saved to nonvolatile memory are labeled *persistent*. You can use the `eventActionSet` command to customize which events are saved in nonvolatile memory and which are not. A total of 128 messages can be saved in nonvolatile memory. These messages are saved in a circular buffer; once the message limit is reached, new messages delete the oldest messages.

[Table 3](#) describes the event log commands. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for detailed information on these commands.

Table 3 Managing the event log

Command	Description
<code>eventShow</code>	Displays the contents of the event log.
<code>eventClear</code>	Clears the contents of the event log.
<code>eventActionShow</code>	Displays which events are persistent and which events are volatile.
<code>eventActionSet</code>	Sets which events are persistent and which events are volatile.

Port log

View this log using the `portLogShow` or `portLogDump` commands. It displays port events, such as, port down, link events, and fabric segmentations. Events from this log are for information only. "[Port log messages](#)" on page 107 lists messages from the port logs.

Use the commands in [Table 4](#) to view and manage port logs.

Table 4 Commands for port log management

Command	Description
<code>portLogClear</code>	Clears all port logs for particular ports.
<code>portLogDisable</code>	Disables port logs for all or particular ports.
<code>portLogDump</code>	Displays port logs for all or particular ports without page breaks.
<code>portLogEnable</code>	Enables port logs for all or particular ports.
<code>portLogShow</code>	Displays port logs for all or particular ports with page breaks.

Message severity levels

There are six severity levels for messages, ranging from Panic to Debug. The definitions in [Table 5](#) can be used as general guidelines for troubleshooting. Make sure to review each error message description thoroughly before taking action.

Table 5 Message severity levels

Event level	Description
0 = Panic	Panic messages indicate that a specific software subsystem has detected a fatal or unrecoverable error condition. Examples are memory allocation failure, system call failure, and software detection of problems with the ASIC or with hardware subsystems. These errors usually indicate partial or complete failure of a subsystem.
1 = Critical	Critical messages indicate that the software has detected serious problems that eventually cause a partial or complete failure of a subsystem if not corrected immediately. A power supply failure, for example, or a rise in temperature must receive immediate attention. Some of the critical errors might overlap in severity with the panic messages.
2 = Error	Error messages indicate error conditions that do not significantly affect overall system functionality. For example, error messages might indicate time-outs on certain operations, failures of certain operations after retries, invalid parameters, or failures to perform requested operations.
3 = Warning	Warning messages highlight current operating conditions that should be checked before they cause failures. For example, a power supply failure in a redundant system relays a warning that the system is no longer operating in redundant mode, and that the failed power supply should be replaced or fixed.
4 = Info	Info messages report the current status of the system components other than error status, for example, detecting on and off line status of a fabric port.
5 = Debug	Debug messages are for debugging use only. They are produced by code inserted by the vendor to inform the user that a suspected problem has occurred.

Error log tasks

These procedures explain error log management.

Viewing the error log

The error log is a collection of all daemon-related errors (such as memory allocation errors), as well as events from the event log. To view the MP Router error log:

1. Log in to the MP Router as admin.
2. Issue the `errShow` command with the following options:

```
errShow [-a]
```

where `-a` displays all the messages without page breaks.

The following command displays all the messages in the error log, one at a time:

```
fabricAP:admin> errShow
```

The following command displays all the messages in the error log without page breaks:

```
fabricAP:admin> errShow -a
```

Sample error log message

The following is a sample message from the error log:

```
fabricAP:admin> errShow

Error 239
-----
301 (EvtMgr): Jan 26 13:10:34
Info CM-EVENT_USER_LOGIN_SUCCESS, 4, User login: admin
```

The fields in the sample message are described in [Table 6](#).

Table 6 Error log message field descriptions

Example	Variable name	Description
Error 239	Error Log Buffer Number	Displays a rotating number that describes the position the message holds in the buffer. This number is not permanently affiliated with the error itself and should not be used when contacting your service provider.
301 (EvtMgr)	Reporting Process ID	Displays the process ID and name of the module reporting the error.
Jan 26 13:10:34	Date and Time Stamp	Displays the date and time the error message occurred.
Info	Severity Level	Displays the severity of the message: Panic, Critical, Error, Warning, Info, or Debug.
CM-EVENT_USER_LOGIN_SUCCESS	Error Code Name	Displays the code name for the error.
4	Severity Level	Displays the severity of the error, in a numbered format: 0 = Panic 1 = Critical 2 = Error 3 = Warning 4 = Info 5 = Debug
User login: admin	Error Description	Displays error-specific data, such as the error reason.

Clearing the error log

To clear the MP Router error log:

1. Log in to the MP Router as admin.
2. Issue the `errClear` command:
`errClear`

The following command clears the error log:

```
fabricAP:admin> errClear
```

Event log tasks

These procedures describe how to manage the event log.

Viewing the event log

To view the MP Router event log:

1. Log in to the MP Router as admin.
2. Issue the `eventShow` command:

```
eventShow
```

The following command displays all the messages in the event log, one at a time:

```
fabricAP:admin> eventShow
```

Clearing the event log

To clear the MP Router event log:

1. Log in to the MP Router as admin.
2. Issue the `eventClear` command:

```
eventClear
```

The following command clears the error log:

```
fabricAP:admin> eventClear  
Event log in RAM is cleared
```

Setting the size of the event log

The default event log size is 1000 messages. This can be modified from 100 to 2000 messages and must be in increments of 100. To set the event log size:

1. Log in to the MP Router as admin.
2. Issue the `eventLogSize` command with the following option:

```
eventLogSize [eventLogSize]
```

where *eventLogSize* is a value from 100 to 2000 and must be an increment of 100.

The following command sets the event log size to 1200 messages:

```
fabricAP:admin> eventLogSize 1200  
Event Log Size is: 1200
```

Modifying the severity level of an event

To modify the severity of an event:

1. Log in to the MP Router as admin.
2. Issue the `eventSeverityShow` command to display the current list of events, event IDs, and the level of severity assigned to those events.
3. Issue the `eventSeverity` command with the following options:

```
eventSeverity eventid severity
```

where *eventid* is the ID number of the event to be modified, and *severity* is one of the following: `panic`, `critical`, `error`, `warning`, `info`, or `debug`. Severity levels must be entered exactly as shown and cannot be specified by numeric value.

The following command sets event ID 13 (Fan down) to a severity of critical:

```
fabricAP:admin> eventSeverity 13 critical  
Event Severity for eventId 13 sets to: critical
```

Modifying the default action for an event

XPath OS can respond to an event with one of the following actions:

- none: The event is not logged.
- log: The event is logged in the event log.
- snmptrap: The event is reported to the SNMP process.
- logandtrap: The event is logged in the event log and reported to the SNMP process.
- persist: The event is logged in both RAM and NVRAM (nonvolatile RAM). The event is preserved over reboots and power cycles.

To modify the default action for an event:

1. Log in to the MP Router as admin.
2. Issue the `eventActionShow` command to display the current list of events, event IDs, and the default action assigned to those events.
3. Issue the `eventActionSet` command with the following options:

```
eventActionSet eventId actiontype
```

where *eventId* is the ID number of the event to be modified, and *actiontype* is one of the following: none, log, snmptrap, logandtrap, or persist. Action types must be entered exactly as shown.

The following command sets event ID 13 (Fan down) action to log:

```
fabricAP:admin> eventActionSet 13 log
Event Action for eventId 13 is set to: log
```

Configuring the syslog daemon

The XPath OS can be configured to use a UNIX[®]-style syslog daemon (syslogd) process to read system errors, forward messages to users, and write the events to log files on a remote UNIX host system.

syslogd overview

XPath OS can be configured to send error log messages to a UNIX host system that supports syslogd. This host system can be configured to receive error messages from the MP Router and store them in files on the computer hard drive. This enables the storage of MP Router error log messages on a host system and overcomes the size limitations of the internal log buffers.

The syslogd is a process that runs on UNIX or Linux[®] systems that reads and logs messages to the system console, log files, other machines, and users as specified by its configuration file. See the manual pages and related documentation for your particular UNIX host system for more information on the syslogd process and its capabilities.

Note that the host system can be running UNIX, Linux, or any other operating system as long as it supports standard syslogd functionality.

XPath OS syslogd CLI commands

Table 7 provides a list of commands related to the syslogd configuration. See the help pages of these commands or the *HP StorageWorks XPath OS 7.4.x command reference guide* for more details.

Table 7 Syslogd configuration commands

Command	Summary
syslogdipAdd	Adds the IP address of the remote syslogd host.
syslogdipRemove	Removes the IP address of the remote syslogd daemon.
syslogdipShow	Shows the list of configured syslogd IP addresses.
eventShow	Displays messages from the event log.

Table 7 Syslogd configuration commands (continued)

Command	Summary
errShow	Displays messages from the error log.
errClear	Clears messages from the error log.

Configuring syslogd

To route messages to a remote host, you need to configure the remote host and enable syslogd on the MP Router.

Configuring syslogd on the remote host

To route messages to a remote host, you need to configure the remote host and enable syslogd on the MP Router.

The syslogd configuration on the UNIX host provides the syslogd daemon with instructions on processing different messages it receives from the fabric application platform. The following two examples show entries in the syslog configuration file, `/etc/syslog.conf`, that store fabric application platform error log messages. See the syslog-related manual pages on your UNIX system for full documentation of the syslogd configuration file.

The following entry in `/etc/syslog.conf` causes all Warning, Error, Critical, and Panic messages from the fabric application platform of UNIX priority warning or higher to be stored in the file `/var/log/messages`:

```
kern.warning /var/log/messages
```

The following entry in `/etc/syslog.conf` causes all messages from the fabric application platform to be stored in the file `/var/log/messages`:

```
kern.debug /var/log/messages
```

The `kern` prefix identifies the use of the kernel syslogd facility to dispatch error log messages to the syslogd daemon. The placement of entries is critical to this function.

Enabling syslogd on the MP Router

This procedure explains how to configure the MP Router to dispatch error log messages to a remote syslogd host:

1. Log in to the MP Router as admin.
2. Issue the `syslogdipAdd` command with the following syntax:
`fabricAP:admin>syslogdipAdd IP_address_of_the_remote_syslogd_host`
3. Verify that the IP address was entered correctly, using the `syslogdipShow` command.

The following example shows how to configure the MP Router to dispatch error log messages to a remote syslogd host whose IP address is 123.123.123.123:

```
fabricAP:admin> syslogdipAdd 123.123.123.123
fabricAP:admin> syslogdipShow
syslog.IP.address.1 123.123.123.123
```

Disabling syslogd on the MP Router

To disable the sending of error log messages to a previously enabled remote syslogd host:

1. Log in to the MP Router as admin.
2. Issue the `syslogdipRemove` command with the following syntax:
`fabricAP:admin>syslogdipRemove IP_address_of_the_remote_syslogd_host`

3. Verify that the IP address was deleted, using the `syslogdipShow` command

The following example shows how to disable sending of error log messages to a previously configured remote syslogd host whose IP address is 123.123.123.123:

```
fabricAP:admin> syslogdipRemove 123.123.123.123
```

Module descriptions

Table 8 lists the modules within the XPath OS that generate messages. The modules are listed alphabetically here and the messages themselves are presented alphabetically in "Error messages" on page 21.

Table 8 Module descriptions

Module name	Description
CM	The Chassis Management (CM) module consists of a set of daemons providing services, such as configuration information, configuration persistence, event log, and statistics for the MP Router and ports. CM messages are typically event messages, such as port up or port down.
DIAG	The Diagnostics (DIAG) module messages typically indicate hardware failures. Each message string provides the MP Router number, the severity level, and the type of hardware problem encountered.
FAB	The Fabric Control Daemon (FAB) module follows the FC-SW2 standard for fabric initialization, such as determining the E_Ports, assigning unique domain IDs to switches, creating a spanning tree, throttling the trunking process, and distributing the domain and alias list to all switches in the fabric.
FCR	The Fibre Channel Router (FCR) module provides device connectivity across fabrics without merging the fabrics. FCR messages include exceeding resource limitations, LSAN zone and device changes, and changes in EX_Port-attached edge fabrics. The FCR messages originate from iswitchd.
MS	<p>The Management Server (MS) module enables the user to obtain information about the Fibre Channel fabric topology and attributes by providing a single management access point. When a Fabric OS switch is used as a proxy, MS provides for both monitoring and control of the following areas:</p> <ul style="list-style-type: none">• Fabric Configuration Server, which provides for the configuration management of the fabric• Unzoned Name Server, which provides access to Name Server information that is not subject to zone constraints• Fabric Zone Server, which provides access to and control of zone information and provides access to the LSAN zones <p>MS supports commands that come from the application program interface (API), Advanced Web Tools, and other internal management tools only, not commands from the devices.</p>
SWAL	The Switch Access Layer (SWAL) module is an API library that enables applications, such as an SNMP agent, read and write access to objects on the switch. These types of errors are rare and usually indicate memory issues or that the SWAL daemon is having trouble communicating with the chassis management daemon.
ZONE	The ZONE module messages indicate problems with zoning and zone configurations.

2 Error messages

XPath OS 7.4.x system error messages are described in the following sections:

- [Chassis Management messages](#), next
- [Diagnostics messages](#), page 79
- [Fabric Control Daemon messages](#), page 81
- [Fibre Channel Router messages](#), page 86
- [Management Server messages](#), page 91
- [Switch Access Layer messages](#), page 98
- [Zone module messages](#), page 102
- [Port log messages](#), page 107

Chassis Management messages

This section describes the Chassis Management (CM) system error messages.

CM-CSCN_CL_ERR

Message

```
process_id (EvtMgr): date time  
Error CM-CSCN_CL_ERR, 2, Connection to fabctl broken
```

Probable cause

The common service connection (CSCN) to the fabctl daemon was broken. The fabctl daemon might exit with an error. This message usually indicates problems with the firmware.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, use the `firmwareDownload` command to update the firmware.

Severity

Error

CM-CSCN_CNT_ERR

Message

```
process_id (EvtMgr): date time  
Critical CM-CSCN_CNT_ERR, 1, Connect fatal error
```

Probable cause

The common service connection (CSCN) daemon suffered a connection error. The CSCN daemon might exit with an error. This message usually indicates problems with the firmware.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, use the `firmwareDownload` command to update the firmware.

Severity

Critical

CM-CSCN_NO_MORE_CHA

Message

```
process_id (EvtMgr): date time
Error CM-CSCN_NO_MORE_CHA, 2, Can't alloc CSCN channel: Reject connect
```

Probable cause

The system cannot allocate the common service connection (CSCN) channel due to a rejected connection. This message usually indicates problems with the firmware.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

CM-EVENT_CONFIG_CHANGE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_CONFIG_CHANGE, 4, type operation: name
```

Probable cause

A configuration change was made on the switch using the CLI or Advanced Web Tools. The second part of the message defines what configuration change was made and the new value for the configuration variable.

The *type* value defines the type of configuration change that was made. Valid values are:

- chassis
- port
- isns
- event
- mgmt-port
- fspf
- zone-server
- fcip
- static-route
- trap-receiver
- user-account
- license
- switch-policy

- snmp-access
- syslog
- fan
- isw-port
- isw-xlate

The *operation* value is the action performed. Valid values are create, delete, and set.

The *name* value is the user-defined value for the configuration variable that was changed.

Recommended action

No action is required.

Severity

Info

CM-EVENT_CONSOLE_LOST_CARRIER_SIGNAL

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_CONSOLE_LOST_CARRIER_SIGNAL, 3, Console lost carrier signal
```

Probable cause

The console connection was lost, typically due to an unplugged or damaged cable. The serial connection session is closed.

Recommended action

1. Verify that the serial console cable is connected.
2. Try to re-establish the connection.
3. If the connection still fails, either check to see if the cable is damaged or replace the cable.

Severity

Warning

CM-EVENT_DIAG_ASIC_REV

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_DIAG_ASIC_REV, 2, Diag asicrevshow failed
```

Probable cause

An ASIC diagnostic test failed.

Recommended action

There are two types of application-specific integrated circuits (ASICs) in the MP Router: a per-port ASIC and a central ASIC.

1. Use the diagPortMem command to determine whether a port ASIC is faulty.
If the port ASIC is faulty, do not use the port. A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.

2. Use the `celloPortTest` command to verify whether the central ASIC is faulty.
If the central ASIC is faulty, the switch needs to be replaced immediately.

Severity

Error

CM-EVENT_DIAG_ASIC_TEST

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_DIAG_ASIC_TEST, 2, Diag diagportmailbox failed
```

Probable cause

The `diagPortMailbox` command failed for a port.

Recommended action

Use the `portShow` command to determine which port is faulty. If the port ASIC is faulty, do not use the port. A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.

Severity

Error

CM-EVENT_DIAG_CELLO_MEM

Message

```
process_id (EvtMgr): date time
Critical CM-EVENT_DIAG_CELLO_MEM, 1, Diag cellomemtest failed
```

Probable cause

The `celloMemTest` command failed and the central ASIC is corrupted or damaged.

Recommended action

If the central ASIC is faulty, the switch needs to be replaced immediately.

Severity

Critical

CM-EVENT_DIAG_CROSS_PORT_TEST

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_DIAG_CROSS_PORT_TEST, 2, Diag crossporttest failed
```

Probable cause

The diagnostic cross-port test failed for one of the following reasons:

- Ports are not cabled correctly or the small-form-factor pluggable (SFP) transceiver is not seated correctly.
- The port ASIC is faulty.

Recommended action

1. Verify that the MP Router is cabled correctly for the test.
Some diagnostic tests require special cabling configurations or loopback plugs. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for information on this test.
2. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
3. Replace the cables and SFP transceivers, if necessary.
4. Use the `portLoopbackTest` command to determine which port of the pair in the `crossPortTest` is faulty.
If the port ASIC is faulty, do not use the port. A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.
5. Run the `crossPortTest` command using the other MAC setting (either FC or Gigabit Ethernet) on the port.

This error might indicate that a particular MAC setting for the port is faulty, while the other MAC setting works correctly. For more information on these commands and the various test modes available, see the *HP StorageWorks XPath OS 7.4.x command reference guide*.

Severity

Error

CM-EVENT_DIAG_GMAC_BRIDGE_LPBK_TEST

Message

```
process_id (EvtMgr): date time  
Critical CM-EVENT_DIAG_GMAC_BRIDGE_LPBK_TEST, 1, Diag gmac2bridgetest failed
```

Probable cause

The link between the management CPU and port ASICs has failed.

Recommended action

1. Reboot or power cycle the switch.
2. If the test still fails, use the `firmwareDownload` command to reinstall the firmware.
3. If this error is persistent, replace the switch immediately.

Severity

Critical

CM-EVENT_DIAG_LOOPBACK_PORT_TEST

Message

```
process_id (EvtMgr): date time  
Error CM-EVENT_DIAG_LOOPBACKPORT_TEST, 2, Diag loopback port test failed
```

Probable cause

The diagnostic `portLoopbackTest` command failed for one of the following reasons:

- The switch is not cabled properly for the test.
- The SFP transceiver is not seated correctly or is defective.
- The port ASIC is faulty.

Recommended action

1. Verify that the MP Router is cabled correctly for the test.
Some diagnostic tests require special cabling configurations or loopback plugs.
2. Verify that the SFP transceiver or loopback plug is seated correctly.
3. If the port continues to fail, it usually means that the port ASIC is faulty, so do not use the port.
A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.
4. Rerun the `portLoopbackTest` command using the other MAC setting (either FC or Gigabit Ethernet) on the port.

This error might indicate that a particular MAC setting for the port is faulty, while the other MAC setting works correctly. For more information on these commands and various test modes available, see the *HP StorageWorks XPath OS 7.4.x command reference guide*.

Severity

Error

CM-EVENT_DIAG_PORT_MEM_ARM_TEST

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_DIAG_PORT_MEM_ARM_TEST, 2, Diag diagportmemarm failed
```

Probable cause

The `diagPortMemarm` test failed for a port.

Recommended action

Use the `portShow` command to determine which port is faulty. If the port ASIC is faulty, do not use the port. A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.

Severity

Error

CM-EVENT_DIAG_PORT_MEM_TEST

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_DIAG_PORT_MEM_TEST, 2, Diag diagportmem failed
```

Probable cause

The `diagPortMem` test failed for a port.

Recommended action

Use the `portShow` command to determine which port is faulty. If the port ASIC is faulty, do not use the port. A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.

Severity

Error

CM-EVENT_DIAG_POST_COMPLETE

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_DIAG_POST_COMPLETE, 4, Diag POST complete
```

Probable cause

The POST (power-on self-test) completed successfully.

Recommended action

No action is required.

Severity

Info

CM-EVENT_DIAG_SPIN_SILK

Message

```
process_id (EvtMgr): date time  
Error CM-EVENT_DIAG_SPIN_SILK, 2, Diag spinsilk test failed
```

Probable cause

The spinSilk command failed for one of the following reasons:

- The cable is not connected properly or the SFP transceiver is not seated correctly.
- The central ASIC is faulty.
- One or more port ASICs are faulty.

Recommended action

1. Verify that the MP Router is cabled correctly for the test.
Some diagnostic tests require special cabling configurations or loopback plugs. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for information on this test.
2. Verify that the SFP transceiver or loopback plug is seated correctly.
3. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
4. Replace the cables and SFP transceivers, if necessary.
5. Use the portShow command to determine which port is faulty, and do not use the port.
A faulty port ASIC does not affect any other port in the switch. The unit can be used until the port is needed to add switch capacity.
6. Use the celloPortTest command to verify whether the central ASIC is faulty.
If the central ASIC is faulty, the switch needs to be replaced immediately.

Severity

Error

CM-EVENT_DIAG_XBAR_TEST

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_DIAG_XBAR_TEST, 2, Diag celloporttest failed
```

Probable cause

The celloPortTest command failed. The central ASIC, the port ASIC, or both might be faulty.

Recommended action

Rerun the test using one-to-one configuration (destination port equal source port) for all tested ports. If all ports fail, either the central ASIC or all the ports are faulty. If some ports run successfully, the failing ports are faulty. If all ports pass, the central ASIC is faulty. If the central ASIC is faulty, the switch must be replaced.

Severity

Error

CM-EVENT_EPORT_SEGMENTATION_EVENT

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_EPORT_SEGMENTATION_EVENT, 3, E-port segmentation occurred at
port n, incompatible
```

Probable cause

An E_Port segmentation occurred.

Recommended action

1. Verify that the SFP transceiver is seated correctly.
2. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
3. Replace the cables and SFP transceivers, if necessary.

Severity

Warning

CM-EVENT_EXTENDED_API_ZONE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_EXTENDED_API_ZONE, 4, Zone database action
```

Probable cause

A zone database changed because of *action*. Valid values for *action* are zone committed (cfgSave, cfgDisable, or cfgEnable) or zone merged.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FABRIC_ELEMENT_REBOOT

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_FABRIC_ELEMENT_REBOOT, 4, SYS-BOOT Restart reason: reason
```

Probable cause

A user-initiated switch reboot or power cycle occurred. Possible values for Restart reason are:

- Reboot
- Unknown

Recommended action

No action is required.

Severity

Info

CM-EVENT_FAN_DOWN

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_FAN_DOWN, 3, Fan n down
```

Probable cause

Fan *n* is down.

Recommended action

1. Verify that the operating temperatures of the switch are acceptable using the `tempShow` command.
Fan problems often result in the chassis overheating, which can damage the switch.
2. Check the fan status using the `fanShow` command.
3. Try reseating the specified fan FRU.
4. If the problem persists, replace the fan field-replaceable unit (FRU).

Severity

Warning

CM-EVENT_FAN_INSERT

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FAN_INSERT, 4, Fan n inserted
```

Probable cause

Fan *n* was inserted into the chassis.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FAN_REMOVE

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FAN_REMOVE, 1, Fan n removed
```

Probable cause

Fan *n* was removed from the chassis.

Recommended action

1. Replace the missing fan FRU.
2. Check the fan status using the `fanShow` command.
3. Verify that the operating temperatures of the switch are acceptable using the `tempShow` command.
Fan problems often result in the chassis overheating, which can damage the switch.

Severity

Warning

CM-EVENT_FAN_UP

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FAN_UP, 4, Fan n up
```

Probable cause

Fan *n* is up.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FC_RSCN_AREA_OFFLINE

Message

```
process_id (EvtMgr): date time
Critical CM-EVENT_FC_RSCN_AREA_OFFLINE, 1, FC RSCN area offline DAP 0xDAP
```

Probable cause

A device went offline. This condition could be caused by a device reboot or a link failure. *DAP* represents the domain:areaID:AL_PA of the device.

Recommended action

1. Verify that the device is operating correctly.
2. Check the link status using the `portShow` command.
3. Verify that the SFP transceiver is seated correctly.
4. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
5. Replace the cables and SFP transceivers, if necessary.

Severity

Critical

CM-EVENT_FC_RSCN_AREA_ONLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FC_RSCN_AREA_ONLINE, 4, FC RSCN area online DAP 0xDAP
```

Probable cause

A device has come online. *DAP* represents the domain:areaID:AL_PA of the device.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FC_RSCN_DOMAIN_OFFLINE

Message

```
process_id (EvtMgr): date time
Critical CM-EVENT_FC_RSCN_DOMAIN_OFFLINE, 1, FC RSCN domain offline DAP 0xDAP
```

Probable cause

A switch was removed from fabric. *DAP* represents the domain:areaID:AL_PA of the switch removed.

Recommended action

1. Verify that the switch was taken offline intentionally.
If not, this message could indicate problems with the switch or a connection failure.
2. Verify that the switch is enabled and functioning.
3. Check the fabric status using the `fabricShow` command.
4. Verify that the interswitch links (ISLs) are cabled correctly.
5. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
6. Replace the cables and SFP transceivers, if necessary.

Severity

Critical

CM-EVENT_FC_RSCN_DOMAIN_ONLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FC_RSCN_DOMAIN_ONLINE, 4, FC RSCN domain online DAP 0xDAP
```

Probable cause

A switch is coming online in the fabric. *DAP* represents the domain:areaID:AL_PA of the switch.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FC_RSCN_FABRIC_CHANGED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FC_RSCN_FABRIC_CHANGED, 4, FC RSCN fabric changed DAP 0xDAP
```

Probable cause

A fabric reformat registered state change notification (RSCN) event was generated due to a zone change or fabric shortest path first (FSPF) protocol database change. *DAP* represents the domain:areaID:AL_PA of the device.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FC_RSCN_PORT_OFFLINE

Message

```
process_id (EvtMgr): date time
Critical CM-EVENT_FC_RSCN_PORT_OFFLINE, 1, FC RSCN port offline DAP 0xDAP
```

Probable cause

A device link has failed, which caused the device to go offline. *DAP* represents the domain:areaID:AL_PA of the device.

Recommended action

1. Check the link status using the `portShow` command.
2. Verify that the SFP transceiver is seated correctly.
3. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
4. Replace the cables and SFP transceivers, if necessary.

Severity

Critical

CM-EVENT_FC_RSCN_PORT_ONLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FC_RSCN_PORT_ONLINE, 4, FC RSCN port online DAP 0xDAP
```

Probable cause

A device is coming online. *DAP* represents the domain:areaID:AL_PA of the device.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCIP_NTP_SYNC_STATE_UP

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCIP_NTP_SYNC_STATE_UP, 4, NTP clock achieved synchronization,
enabling FCIP WAN_TOV enforcement.
```

Probable cause

The MP Router established connectivity to an NTP server, and the switch clock has been synchronized. The Fibre Channel over Internet Protocol (FCIP) service is now able to perform wide-area network timeout value (WAN_TOV) timeout enforcement.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCIP_NTP_SYNC_STATE_DOWN

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCIP_NTP_SYNC_STATE_DOWN, 3, NTP clock lost synchronization,
disabling FCIP WAN_TOV enforcement.
```

Probable cause

The MP Router lost connectivity to the NTP server, and the switch clock has fallen out of synchronization. The FCIP service stops enforcing WAN_TOV timeouts for ports configured for this feature.

Recommended action

Reconfigure the connection to a valid NTP server using the `tsClockServer` command.

Severity

Warning

CM-EVENT_FCIP_TUNNEL_DOWN

Message

```
process_id (EvtMgr): date time
Critical CM-EVENT_FCIP_TUNNEL_DOWN, 1, FCIP tunnel n down
```

Probable cause

FCIP tunnel *n* is down due to:

- An administrator disabling the FCIP tunnel
- A physical connectivity problem
- A TCP connectivity timeout

Recommended action

1. Verify the physical link status using the `portShow` command on both ports in the connection.
2. Issue the `rnPing` command to the remote IP address to check for basic TCP connectivity.
3. Verify the configuration using the `portCfgGige` and `portCfgFcip` commands.
4. Verify that the SFP transceiver is seated correctly.
5. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
6. Replace the cables and SFP transceivers, if necessary.

Severity

Critical

CM-EVENT_FCIP_TUNNEL_UP

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCIP_TUNNEL_UP, 4, FCIP tunnel n up
```

Probable cause

FCIP tunnel *n* is up due to:

- A switch reboot
- An administrator enabling the FCIP tunnel

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCIP_WWN_MISMATCH

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_FCIP_WWN_MISMATCH, 2, FCIP tunnel WWN mismatch
```

Probable cause

An FCIP tunnel cannot be established because the world-wide name (WWN) on the remote side does not match the security-restricted local WWN.

Recommended action

1. Check the FCIP configuration using the `portCfgFcip` command on the remote side.
2. Issue the `switchShow` command on the local side to get the local switch WWN.
3. Correct the remote FCIP configuration WWN to match the local switch WWN.
4. Check the FCIP configuration WWN on the local switch, and match the WWN with that of the remote switch.

Severity

Error

CM-EVENT_FCR_EX_PORT_FABRIC_DONE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_EX_PORT_FABRIC_DONE, 4, FCR EX_Port fabric done at port n
```

Probable cause

An FCR EX_Port fabric has completed a fabric build at port *n*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_FABRIC_NO_LONGER_REACHABLE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_FABRIC_NO_LONGER_REACHABLE, 4, FCR fabric no longer
reachable at port n fabric id m
```

Probable cause

A fabric *m* at port *n* is no longer accessible through the backbone fabric. This condition could be caused by a link or switch failure.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_INDIVIDUAL_PHYSICAL_DEVICE_OFFLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_INDIVIDUAL_PHYSICAL_DEVICE_OFFLINE, 4, FCR physical device wwn
offline at fabric number
```

Probable cause

The physical device *wwn* is offline in the specified fabric *number*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_INDIVIDUAL_PHYSICAL_DEVICE_ONLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_INDIVIDUAL_PHYSICAL_DEVICE_ONLINE, 4, FCR physical device wwn
online at fabric number
```

Probable cause

The physical device *wwn* is online in the specified fabric *number*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_ISWFAB (malloc)

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_ISWFAB, 3, isw: malloc failed for value
```

Probable cause

A memory allocation failed. The system is low on memory, and possibly has a memory leak. The *value* is either a *cfg*, *zone*, or *alias_name*.

Recommended action

If the problem persists, reboot the switch.

Severity

Warning

CM-EVENT_FCR_ISWFAB (group slots)

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_ISWFAB, 3, ran out of available group slots
```

Probable cause

The slots available for storing zoning information are filled to capacity.

Recommended action

Reduce the size of the zone database in the edge fabric. This task can be accomplished by deleting all unused aliases, zones, and configurations.

Severity

Warning

CM-EVENT_FCR_LOCAL_LSAN_DEVICE_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_LOCAL_LSAN_DEVICE_ENTRY_EXHAUSTED, 3, FCR local LSAN device
entries exhausted
```

Probable cause

The number of devices created through logical storage area network (LSAN) zones within the meta-SAN is greater than the LSAN zone database limitations of the local Fibre Channel Router (FCR).

Recommended action

Remove excess devices entries within LSAN zones so that the number of devices is within the range of the zone database limitations of the local FCR.

Severity

Warning

CM-EVENT_FCR_LOCAL_LSAN_ZONE_DEV_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_LOCAL_LSAN_ZONE_DEV_ENTRY_EXHAUSTED, 3, FCR local LSAN zone
name dev entries exhausted
```

Probable cause

The number of devices defined for an LSAN is greater than allowed by the LSAN zone database limitations of the local FCR.

Recommended action

Remove excess device entries from the LSAN zone until the number of devices is within the range of the LSAN zone database limitations of the local FCR.

Severity

Warning

CM-EVENT_FCR_LOCAL_LSAN_ZONE_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_LOCAL_LSAN_ZONE_ENTRY_EXHAUSTED, 3, FCR local LSAN zone
entries exhausted
```

Probable cause

The number of LSAN zones created within a meta-SAN is greater than the LSAN zone database limitations of the local FCR.

Recommended action

Remove excess LSAN zones so that the number of LSAN zones is within the range of the database limitations of the local FCR.

Severity

Warning

CM-EVENT_FCR_LOCAL_PHANTOM_NWWN_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_LOCAL_PHANTOM_NWWN_ENTRY_EXHAUSTED, 3, FCR local phantom node
WWN entries exhausted
```

Probable cause

The number of node WWNs in use is greater than the node WWN (NWWN) resources of the local FCR.

Recommended action

You might need to limit the number of node WWNs required by limiting the remote edge fabric connectivity (which limits the number of translate domains).

Severity

Warning

CM-EVENT_FCR_LOCAL_PHANTOM_PWWN_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_FCR_LOCAL_PHANTOM_PWWN_ENTRY_EXHAUSTED, 3, FCR local
phantom port WWN entries exhausted
```

Probable cause

The number of port WWNs in use is greater than the port WWN (PWWN) resources of the local FCR.

Recommended action

You might need to limit the number of port WWNs required by limiting the remote edge fabric connectivity (which limits the number of translate domains). You can also limit the number of proxy devices for a translate domain (which limits the number of translate domain ports required) by limiting the devices specified in LSAN zones.

Severity

Warning

CM-EVENT_FCR_LOCAL_PROXY_DEVICE_SLOT_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_FCR_LOCAL_PROXY_DEVICE_SLOT_ENTRY_EXHAUSTED, 2, FCR local
proxy device slot entries exhausted
```

Probable cause

Resources to persistently store the proxy device slot (translate domain port and AL_PA) to the remote WWN have been consumed.

Recommended action

You might need to remove the proxy device slots by using the `fcProxyConfig` command or limit proxy devices by removing LSAN zone entries.

Severity

Error

CM-EVENT_FCR_LSAN_ZONE_ADDED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_LSAN_ZONE_ADDED, 4, FCR LSAN zone added at port n
```

Probable cause

An LSAN zone was added in the edge fabric attached to port *n*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_LSAN_ZONE_DEVICE_ADDED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_LSAN_ZONE_DEVICE_ADDED, 4, FCR LSAN zone device added at port n
```

Probable cause

A device was added to an LSAN zone in the edge fabric.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_LSAN_ZONE_DEVICE_REMOVED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_LSAN_ZONE_DEVICE_REMOVED, 4, FCR LSAN zone device removed at
port n
```

Probable cause

A device was removed from an LSAN zone in the edge fabric.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_LSAN_ZONE_DISABLED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_LSAN_ZONE_DISABLED, 4, FCR LSAN zone disabled at port n
```

Probable cause

An LSAN zone was disabled in the edge fabric.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_LSAN_ZONE_ENABLED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_LSAN_ZONE_ENABLED, 4, FCR LSAN zone enabled at port n: cfg
```

Probable cause

An LSAN zone was enabled in the edge fabric attached to port *n*. The enabled LSAN zone configuration is listed.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_LSAN_ZONE_REMOVED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_LSAN_ZONE_REMOVED, 4, FCR LSAN zone removed at port n
```

Probable cause

A zone entry was removed from the LSAN zone in the edge fabric.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_NEW_NR_PORT_ADDED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_NEW_NR_PORT_ADDED, 4, FCR new NR_Port added at port n domain_id
domID
```

Probable cause

An NR_Port was created at port *n* on domain *domID*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_NODE_WWN_POOL_FULL

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_NODE_WWN_POOL_FULL, 4, FCR node wwn pool 95% allocated
```

Probable cause

The node WWN pool is close to rollover, and the WWN entries not in use are reused as needed.

Recommended action

It is unlikely that WWN conflicts occur as a result of pool rollover unless the FCR is deployed in a very large meta-SAN environment with a large number of LSAN devices and fabrics, or there are highly dynamic changes to EX_Port connectivity. WWN conflicts might cause unpredictable behavior in management applications. To avoid WWN conflicts, all EX_Ports attached to fabrics with highly dynamic changes to EX_Port connectivity should be disabled then re-enabled.

Severity

Info

CM-EVENT_FCR_NODE_WWN_ROLL_OVER

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_FCR_NODE_WWN_ROLL_OVER, 4, FCR node wwn roll over
```

Probable cause

The node WWN pool rolled over and WWN entries not in use are reused as needed.

Recommended action

It is unlikely that WWN conflicts occur as a result of pool rollover unless the FCR is deployed in a very large meta-SAN environment with a large number of LSAN devices and fabrics, or there are highly dynamic changes to EX_Port connectivity. WWN conflicts might cause unpredictable behavior in management applications. To avoid WWN conflicts, all EX_Ports attached to fabrics with highly dynamic changes to EX_Port connectivity should be disabled then re-enabled.

Severity

Info

CM-EVENT_FCR_PHANTOM_FSPF_DONE

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_FCR_PHANTOM_FSPF_DONE, 4, FCR phantom FSPF done at port n
```

Probable cause

An EX_Port completed FSPF database exchange on port *n*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_PHYSICAL_DEVICE_OFFLINE

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_FCR_PHYSICAL_DEVICE_OFFLINE, 4, FCR physical device offline at port n
```

Probable cause

A physical device connected to port *n* has gone offline.

Recommended action

1. Verify that the device was intended to be taken offline. If it was not, verify that the device is functioning properly.
2. Verify that the SFP transceiver is seated correctly.
3. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
4. Replace the cables and SFP transceivers, if necessary.

Severity

Info

CM-EVENT_FCR_PHYSICAL_DEVICE_ONLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_PHYSICAL_DEVICE_ONLINE, 4, FCR physical device online at port n
```

Probable cause

A physical device connected to port *n* came online.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_PORT_WWN_POOL_FULL

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_PORT_WWN_POOL_FULL, 4, FCR port wwn pool 95% allocated
```

Probable cause

The port WWN pool is nearly full and close to rollover. When rollover occurs, WWN entries not in use are reused as needed.

Recommended action

It is unlikely that WWN conflicts occur as a result of pool rollover unless the FCR is deployed in a very large meta-SAN environment with a large number of LSAN devices and fabrics, or there are highly dynamic changes to EX_Port connectivity. WWN conflicts might cause unpredictable behavior in management applications. To avoid WWN conflicts, all EX_Ports attached to fabrics with highly dynamic changes to EX_Port connectivity should be disabled then re-enabled.

Severity

Info

CM-EVENT_FCR_PORT_WWN_ROLL_OVER

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_PORT_WWN_ROLL_OVER, 4, FCR port wwn roll over
```

Probable cause

The port WWN pool rolled over and WWN entries not in use are reused as needed.

Recommended action

It is unlikely that WWN conflicts occur as a result of pool rollover unless the FCR is deployed in a very large meta-SAN environment with a large number of LSAN devices and fabrics, or there are highly dynamic changes to EX_Port connectivity. WWN conflicts might cause unpredictable behavior in management applications. To avoid WWN conflicts, all EX_Ports attached to fabrics with highly dynamic changes to EX_Port connectivity should be disabled then re-enabled.

Severity

Info

CM-EVENT_FCR_PROXY_DEV_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_FCR_PROXY_DEV_ENTRY_EXHAUSTED, 2, FCR proxy device entries exhausted
at port n
```

Probable cause

The number of proxy devices is greater than allowed by the port resource at port *n*.

Recommended action

1. Remove excess LSAN zones or devices until the number of proxy devices exported is within the range allowed by the port resource.
2. Use the `fcrResourceShow` command to view FCR resources including LSAN zone resources, LSAN device resources, and proxy device port resources.
3. Use the `fcrProxyDevShow` command to determine how many proxy devices are created in the fabric with the port resource problem.

LSAN zones are removed using standard zoning commands, such as `zoneShow`, `zoneRemove`, `zoneDelete`, `cfgDelete`, and `cfgDisable`, in the edge fabric. Proxy devices are removed by zoning operations or by bringing physical devices offline (for example, disabling the port that a device is attached to, and then disconnecting the cable or disabling the device).

Severity

Error

CM-EVENT_FCR_PROXY_DEVICE_CREATED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_PROXY_DEVICE_CREATED, 4, FCR proxy device created at port n
```

Probable cause

A proxy device at port *n* was imported.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_PROXY_DEVICE_DELETED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_PROXY_DEVICE_DELETED, 4, FCR proxy device deleted at port n
```

Probable cause

A proxy device at port *n* was deleted.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_REAL_SWITCH_IN_AN_EDGE_FABRIC_ONLINE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_REAL_SWITCH_IN_AN_EDGE_FABRIC_ONLINE, 4, FCR real switch in an
edge fabric online at port n domain_id n
```

Probable cause

An FCR detected that a switch in a connected edge fabric came online.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_REMOTE_LSAN_ZONE_UPDATE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_REMOTE_LSAN_ZONE_UPDATE, 4, FCR remote LSAN zone update:domian
id n
```

Probable cause

An FCR received an update of LSAN zone information from another FCR.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FCR_ROUTER_PORT_ENTRY_EXHAUSTED

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_FCR_ROUTER_PORT_ENTRY_EXHAUSTED, 2, FCR router port entries
exhausted at port n
```

Probable cause

The number of NR_Port entries being created is greater than allowed by the port resource.

Recommended action

1. Disable EX_Ports until the number of NR_Ports is within the range allowed by the port resource.
You can display the NR_Port limit using the `fcResourceShow` command.
2. Use the `portDisable` or `portStop` command to disable EX_Ports.

Severity

Error

CM-EVENT_FCR_TRANSLATE_PHANTOM_OWNERSHIP_SET

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_FCR_TRANSLATE_PHANTOM_OWNERSHIP_SET, 4, FCR translate phantom
ownership set at port n fabric id fabric_id
```

Probable cause

Multiple EX_Ports attached to the same edge fabric have elected the indicated EX_Port as the owner of a translate phantom domain. This translate phantom domain represents the remote fabric indicated by *fabric_id* at port *n*.

Recommended action

No action is required.

Severity

Info

CM-EVENT_FILE_SYSTEM_FULL

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_FILE_SYSTEM_FULL, 2, Partition name capacity is percentage%
```

Probable cause

An application is filling up the root partition of compact flash, threatening switch stability. The file system monitor tracks the capacity of up to six file partitions. By default, only the following three directories are monitored:

- /
- /var
- /thirdparty

By default, the file-system-full threshold is set to 85 percent of the capacity. The monitoring daemon polls the file system statistics every 10 seconds, but it does not clean up the file system.

Following are the default values for the variables within the configuration file:

```
fileMonitoring.partition.1.name:/
fileMonitoring.partition.1.threshold:85
fileMonitoring.partition.2.name:/var
fileMonitoring.partition.2.threshold:85
fileMonitoring.partition.3.name:/thirdparty
fileMonitoring.partition.3.threshold:85
fileMonitoring.partition.4.name:
fileMonitoring.partition.4.threshold:85
fileMonitoring.partition.5.name:
fileMonitoring.partition.5.threshold:85
fileMonitoring.partition.6.name:
fileMonitoring.partition.6.threshold:85
```

You can change the file system monitoring configuration using the `configUpload` and `configDownload` commands. The maximum length for a partition name is 30 characters, including the terminator (`\0`). The valid range of values for the threshold is between 70 and 100 percent.

In XPath OS, the file system configures compact flash into the following five partitions:

- /287 MB
- /var 10 MB
- /usrpkg1 75 MB
- /usrpkg2 75 MB
- /thirdparty 10 MB

Recommended action

Increase the threshold of the partition or clean up the partition by removing temporary files.

There is no specific command to change the threshold.

1. Use the `configUpload` command to upload the switch configuration.
2. Change the threshold value.
3. Use the `configDownload` command to download the file to the switch.

△ **CAUTION:** These actions require a root login; contact your switch support supplier before performing these actions.

Log in as root and use the `rm` command to delete temporary files. For example, within the root directory (/), use the following commands:

```
rm /tmp/*
rm /usr/cores/*
```

Severity

Error

CM-EVENT_ISCSI_AUTHENTICATION_FAILED

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_ISCSI_AUTHENTICATION_FAILED, 2, iSCSI authentication failed
```

Probable cause

An iSCSI initiator did not specify the right password.

Recommended action

Check the passwords for both the initiator and the target using the `iscsiAuthCfg` command.

Severity

Error

CM-EVENT_ISCSI_DB_CHANGE

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_ISCSI_DB_CHANGE, 4, iSCSI db change: wwn or chap
```

Probable cause

A configuration change occurred for the WWN or Challenge-Handshake Authentication Protocol (CHAP) pools, or a merge process occurred between the primary and secondary iSCSI switches.

Recommended action

No action is required.

Severity

Info

CM-EVENT_ISCSI_LOGIN_FAILED

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_ISCSI_LOGIN_FAILED, 2, iSCSI login failed: login_level
```

Probable cause

An iSCSI initiator failed to successfully negotiate operational parameters with the target.

Recommended action

Check the list of parameters negotiated from the initiator. Look at the `/var/log/messages` file for the exact parameter that the switch expected but did not get from the initiator.

Severity

Error

CM-EVENT_ISCSI_LOGIN_SUCCESS

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_ISCSI_LOGIN_SUCCESS, 4, iSCSI login: login_level
```

Probable cause

An iSCSI initiator successfully logged in to a target.

Recommended action

No action is required.

Severity

Info

CM-EVENT_ISCSI_SESSION_ABORTED

Message

```
process_id (EvtMgr): date time
Error CM-EVENT_ISCSI_SESSION_ABORTED, 2, iSCSI session aborted: session_id
```

Probable cause

An active session between an initiator and a target was aborted due to a connectivity failure.

Recommended action

Check connectivity and availability of the initiator and target.

Severity

Error

CM-EVENT_ISCSI_SESSION_ESTABLISHED

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_ISCSI_SESSION_ESTABLISHED, 4, iSCSI session established: session_id
```

Probable cause

An iSCSI initiator successfully established a session to a target.

Recommended action

No action is required.

Severity

Info

CM-EVENT_ISCSI_SWITCH_ROLE_CHANGE

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_ISCSI_SWITCH_ROLE_CHANGE, 4, iSCSI switch role change: acting  
primary, secondary, or standalone
```

Probable cause

An iSCSI role change is being negotiated.

Recommended action

No action is required.

Severity

Info

CM-EVENT_LICENSE_CHANGE

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_LICENSE_CHANGE, 3, License change (add or remove)
```

Probable cause

The registered license has been added or removed.

Recommended action

No action is required.

Severity

Warning

CM-EVENT_MODULE_DOWN

Message

```
process_id (EvtMgr): date time  
Critical CM-EVENT_MODULE_DOWN, 1, Module down
```

Probable cause

One of the following three events has occurred:

- When the switch is first powered on, the iomctlr daemon gets the image version number from nonvolatile memory and sends it to the cpmgr daemon. When this version does not match the version configured in the database, this message is generated by cpmgr, indicating that you must download a new image into nonvolatile memory that matches what is configured in the database.
- After the switch has been brought up and is running, the cpmgr daemon sends a heartbeat message to the iomctlr daemon. If cpmgr does not receive a response to three consecutive heartbeats, this message is generated by cpmgr, indicating a system failure occurred and a reboot is necessary.
- The message is generated during a switch shutdown initiated by the reboot command.

Recommended action

1. If this message is generated because of the first event above, install a new version of the firmware and reboot.
2. Verify that the firmware version in nonvolatile memory matches that configured in the database by issuing the `firmwareShow` command.
See the *HP StorageWorks XPath OS 7.4.x command reference guide* for more information on this command.
3. If this message is generated because of the second event above, reboot the switch.

Severity

Critical

CM-EVENT_MODULE_UP

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_MODULE_UP, 4, Module up
```

Probable cause

The switch was rebooted or the module is operational.

Recommended action

No action is required.

Severity

Info

CM-EVENT_PORT_DISABLE

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_PORT_DISABLE, 3, Port n disabled
```

Probable cause

Port *n* was disabled using the `portDisable` command or Advanced Web Tools.

Recommended action

This is an administrator-initiated operation. If the operation was intended, no action is required.

Severity

Warning

CM-EVENT_PORT_DOWN

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_PORT_DOWN, 3, FC port n down
```

Probable cause

FC port *n* is down.

Recommended action

1. Check the port admin status using the `portShow` command.
2. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
3. Replace the cables and SFP transceivers as necessary.

Severity

Warning

CM-EVENT_PORT_ENABLE

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_PORT_ENABLE, 3, Port n enabled
```

Probable cause

Port *n* was enabled using the `portEnable` command.

Recommended action

This is an administrator-initiated operation. If the operation was intended, no action is required.

Severity

Warning

CM-EVENT_PORT_ERROR

Message

```
process_id (EvtMgr): date time  
Error CM-EVENT_PORT_ERROR, 2, Port error
```

Probable cause

An invalid full loop configuration was initiated or a port driver failed.

Recommended action

1. Check the port configuration using the `portCfgGige` command or Advanced Web Tools.
2. Remove extra devices from the loop.

If the error is due to a port driver failure, the system restarts the port.

Severity

Error

CM-EVENT_PORT_ICMP_ERROR

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_PORT_ICMP_ERROR, 3, Port ICMP error
```

Probable cause

One of the following port ICMP errors has occurred on port *n*:

- Network unreachable
- Host unreachable
- Protocol unreachable
- Port unreachable
- Fragmentation needed but don't-fragment bit set
- Source route failed
- Destination network unknown
- Destination host unknown
- Source host isolated
- Destination network administratively prohibited
- Destination host administratively prohibited
- Network unreachable for TOS
- Host unreachable for TOS
- Communication administratively prohibited by filtering
- Host precedence violation
- Precedence cutoff in effect
- Redirect for network
- Redirect for host
- Redirect for type-of-service and network
- Redirect for type-of-service and host
- Time-to-live equals 0 during transit
- Time-to-live equals 0 during reassembly

- IP header bad
- Required option missing

Recommended action

1. Check port configuration using the `portShow`, `portCfgGige`, and `portCfgFcip` commands or Advanced Web Tools.
2. Correct the IP configuration with an action appropriate to the error listed.
3. Check for an IP network outage.
4. Correct IP network issues as required.

Severity

Warning

CM-EVENT_PORT_LINK_DOWN

Message

```
process_id (EvtMgr): date time
Critical CM-EVENT_PORT_LINK_DOWN, 1, FC n link down
```

Probable cause

FC link *n* is down. This message occurs when a cable is disconnected or an administrator sets the port as down using the CLI or Advanced Web Tools.

Recommended action

1. Check the link status using the `portShow` command.
2. Verify that the port is cabled correctly.
3. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
4. Replace the cables and SFP transceivers as necessary.

Severity

Critical

CM-EVENT_PORT_LINK_UP

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_PORT_LINK_UP, 4, FC n link up
```

Probable cause

FC link *n* is up.

Recommended action

No action is required.

Severity

Info

CM-EVENT_PORT_STARTED

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_PORT_STARTED, 3, Port n started
```

Probable cause

Port *n* was started using the `portStart` command or Advanced Web Tools.

Recommended action

This is an administrator-initiated operation. If the operation was intended, no action is required.

Severity

Warning

CM-EVENT_PORT_STOPPED

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_PORT_STOPPED, 3, Port n stopped
```

Probable cause

Port *n* was stopped using the `portStop` command or Advanced Web Tools.

Recommended action

This is an administrator-initiated operation. If the operation was intended, no action is required. Otherwise, check the port admin status using the `portShow` command.

Severity

Warning

CM-EVENT_PORT_UP

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_PORT_UP, 4, FC port n up
```

Probable cause

FC port *n* is up.

Recommended action

No action is required.

Severity

Info

CM-EVENT_POWER_DOWN

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_POWER_DOWN, 3, Power n down
```

Probable cause

Power supply *n* is down, where *n* represents either power supply 1 or 2.

Recommended action

1. Check the power supply status using the `chassisShow` command.
2. Try reseating the specified power supply.
3. If the problem persists, replace the failed power supply.

Severity

Warning

CM-EVENT_POWER_INSERT

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_POWER_INSERT, 4, Power n inserted
```

Probable cause

Power supply *n* was inserted, where *n* represents either power supply 1 or 2.

Recommended action

No action is required.

Severity

Info

CM-EVENT_POWER_REMOVE

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_POWER_REMOVE, 3, Power n removed
```

Probable cause

Power supply *n* was removed, where *n* represents either power supply 1 or 2.

Recommended action

1. Check the power supply status using the `chassisShow` command.
2. If the power supply is still in the chassis, try reseating the specified power supply.
3. If the power supply is removed from the chassis (due to failure), replace it with a new power supply FRU.

Severity

Warning

CM-EVENT_POWER_UP

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_POWER_UP, 4, Power n up
```

Probable cause

Power supply *n* is operational, where *n* represents either power supply 1 or 2.

Recommended action

No action is required.

Severity

Info

CM-EVENT_RPG_OPERATION

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_RPG_OPERATION, 3, RPG operation
```

Probable cause

A firmware download operation was performed.

Recommended action

Use the `version` command to verify the installed version of the firmware.

Severity

Warning

CM-EVENT_SFP_INSERTED

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_SFP_INSERTED, 4, An SFP has been inserted at port n
```

Probable cause

The SFP transceiver at port *n* was inserted.

Recommended action

No action is required.

Severity

Info

CM-EVENT_SFP_REMOVED

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_SFP_REMOVED, 3, An SFP has been removed at port n
```

Probable cause

The SFP transceiver at port *n* was removed.

Recommended action

1. Check the SFP transceiver status using the `sfpShow` command.
2. Replace any missing SFP transceivers.
3. Verify that the SFP transceiver is seated correctly.
4. Check for faulty cables, deteriorated SFP transceivers, or dirty connections.
5. Replace the cables and SFP transceivers if necessary.

Severity

Warning

CM-EVENT_SHUTDOWN_TEMP_EXCEEDED

Message

```
process_id (EvtMgr): date time  
Error CM-EVENT_SHUTDOWN_TEMP_EXCEEDED, 2, Shutdown temperature exceeded, card n  
sensor s temp temp
```

Probable cause

The shutdown temperature limit has been exceeded. The switch automatically initiates a shutdown. Temperature problems usually indicate either defective fans or environmental temperature problems.

Recommended action

1. Verify or perform immediate shutdown of the switch.
Excessive temperatures can damage the MP Router. Wait for the switch to cool before rebooting and running diagnostic commands.
2. Use the `tempShow` command to view the temperature of the MP Router.
3. Use the `fanShow` command to verify that the fans are operating properly.
4. Replace any defective fans.
5. Verify that the room temperature is within the operational range.
See the installation guide for your switch for details about the operational temperature range.

Severity

Error

CM-EVENT_SHUTDOWN_TEMP_EXCEEDED_CLEAR

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_SHUTDOWN_TEMP_EXCEEDED_CLEAR, 4, Shutdown temperature exceeded
clear, card n sensor s temp temp
```

Probable cause

The temperature warning has been cleared and the switch temperature is within operational range.

Recommended action

No action is required.

Severity

Info

CM-EVENT_SWITCH_DISABLE

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_SWITCH_DISABLE, 3, Switch disabled
```

Probable cause

The switch was disabled using the `switchDisable` command or Advanced Web Tools.

Recommended action

This is an administrator-initiated operation. If the operation was intended, no action is required.

Severity

Warning

CM-EVENT_SWITCH_ENABLE

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_SWITCH_ENABLE, 3, Switch enabled
```

Probable cause

The switch was enabled using the `switchEnable` command or Advanced Web Tools.

Recommended action

This is an administrator-initiated operation. If the operation was intended, no action is required.

Severity

Warning

CM-EVENT_SWITCH_READY

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_SWITCH_READY, 4, Switch ready
```

Probable cause

The switch is ready after a reboot or a firmware download operation.

Recommended action

No action is required.

Severity

Info

CM-EVENT_SWITCH_STATUS_CHANGE

Message

```
process_id (EvtMgr): date time  
Warning CM-EVENT_SWITCH_STATUS_CHANGE, 3, Switch overall status is changed from  
status to status
```

Probable cause

The overall status of the switch changed, where *status* can be one of the following values:

- unknown
- healthy/ok
- marginal/warning
- down/failed

Recommended action

1. Check the switch status using the `switchStatusShow` command.
Status changes are usually a result of faulty hardware, such as deteriorating SFP transceivers, faulty fans, or power supply problems.
2. Check the error log for other messages that pinpoint the subsystem causing the status change.
3. Replace any faulty or deteriorating hardware.

Severity

Warning

CM-EVENT_TEMPERATURE_SHUTDOWN

Message

```
process_id (EvtMgr): date time  
Critical CM-EVENT_TEMPERATURE_SHUTDOWN, 1, Switch shutdown due to shutdown  
temperature exceeded
```

Probable cause

At least two temperature sensors have crossed the shutdown temperature threshold. Temperature problems usually indicate problems with fans or the environment temperature.

Recommended action

1. Wait until the switch has cooled down before rebooting and running diagnostics.
 2. Use the `tempShow` command to view the temperature of the MP Router.
 3. Use the `fanShow` command to verify that the fans are operating properly.
 4. Replace any defective fan FRUs.
 5. Verify that the room temperature is within the operational range.
- See the installation guide for your switch for details about the operational temperature range.

Severity

Critical

CM-EVENT_USER_LOGIN_SUCCESS

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_USER_LOGIN_SUCCESS, 4, User login: login_level
```

Probable cause

An admin or user has successfully logged in to the MP Router.

Recommended action

No action is required.

Severity

Info

CM-EVENT_USER_LOGOUT

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_USER_LOGOUT, 4, User login: login_level
```

Probable cause

An admin or user has logged out of the MP Router.

Recommended action

No action is required.

Severity

Info

CM-EVENT_WARNING_TEMP_EXCEEDED

Message

```
process_id (EvtMgr): date time
Warning CM-EVENT_WARNING_TEMP_EXCEEDED, 3, Warning temperature exceeded, card n
sensor s temp t
```

Probable cause

The warning temperature limit has been exceeded. The fan speed is automatically increased. Temperature problems usually indicate problems with fans or the environment temperature.

Recommended action

1. Use the `tempShow` command to view the temperature of the MP Router.
2. Use the `fanShow` command to verify that the fans are operating properly.
3. Replace any defective fan FRUs.
4. Verify that the room temperature is within the operational range.
See the installation guide for your switch for details about the operational temperature range.

Severity

Warning

CM-EVENT_WARNING_TEMP_EXCEEDED_CLEAR

Message

```
process_id (EvtMgr): date time
Info CM-EVENT_WARNING_TEMP_EXCEEDED_CLEAR, 4, Warning temperature exceeded clear,
card n sensor s temp t
```

Probable cause

The warning temperature limit has been cleared. Temperature problems usually indicate problems with fans or the environment temperature.

Recommended action

No action is required.

Severity

Info

CM-EVENT_ZONE_CHANGE

Message

```
process_id (EvtMgr): date time  
Info CM-EVENT_ZONE_CHANGE, 4, type operation: name
```

Probable cause

A change in the zoning configuration, where *type* is one of the following:

- ZoneAlias
- ZoneDB
- ZoneFA
- ZoneQL
- ZoneSet
- zone

operation is one of the following:

- save
- bulk_created
- clear

name is one of the following:

- ZONE_INFO
- rn_zone.db

Recommended action

No action is required.

Severity

Info

CM-INVALID_IMAGE_VERSION_ERR

Message

```
process_id (EvtMgr): date time  
Critical CM-INVALID_IMAGE_VERSION_ERR, 1,
```

Probable cause

The image in nonvolatile memory does not match the image set in the database. This disparity usually means that the firmware is corrupt.

Recommended action

Use the `firmwareDownload` command to reinstall the firmware.

Severity

Critical

CM-MEM_ALLOC_ERR

Message

```
process_id (EvtMgr): date time  
Critical CM-MEM_ALLOC_ERR, 1, fail to alloc memory
```

Probable cause

A memory resource is not available because of a memory leak.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB and the `iswitchd` daemon typically shows 50 MB. If any daemon is running up to 10 MB or the `nsd` daemon is above 50 MB, there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the firmware.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Critical

CM-MISSING_SFP_LIST_ERR

Message

```
process_id (EvtMgr): date time  
Critical CM-MISSING_SFP_LIST_ERR, 1,
```

Probable cause

The file that contains a list of supported SFP transceivers is missing.

Recommended action

1. Reboot the MP Router.
2. If the problem persists, use the `firmwareDownload` command to reinstall the firmware.

Severity

Critical

CM-NVRAM_IOCTL_ERR

Message

```
process_id (EvtMgr): date time  
Error CM-NVRAM_IOCTL_ERR, 2, ioctl() failed on /dev/nvram
```

Probable cause

The access permission for the `/dev/nvram` directory is incorrect due to faulty firmware.

Recommended action

Use the `firmwareDownload` command to reinstall the firmware.

Severity

Error

CM-NVRAM_OPEN_ERR

Message

```
process_id (EvtMgr): date time
Error CM-NVRAM_OPEN_ERR, 2, open() failed on /dev/nvram
```

Probable cause

The access permission for the `/dev/nvram` directory is incorrect due to faulty firmware.

Recommended action

Use the `firmwareDownload` command to reinstall the firmware.

Severity

Error

CM-ZONE_DB_FAIL_1

Message

```
process_id (EvtMgr): date time
Error CM-ZONE_DB_FAIL_1, 2, Failed to add, zoneDB bigger than max-zonedb-size
function_name
```

Probable cause

The size of the zone database exceeded the supported size limit of 128 KB for the MP Router.

Recommended action

1. Remove objects from the zone database until the size of the database is within supported limits.
Use the `cfgShow` command to view the zones and aliases in the current zone configuration. Use the `zoneRemove` command to remove unused members of a zone. Use the `zoneDelete` command to remove unused zones.
2. Retry the operation.

Severity

Error

CM-ZONE_DB_FAIL_2

Message

```
process_id (EvtMgr): date time  
Critical CM-ZONE_DB_FAIL_2, 1, Bad object type type function_name
```

Probable cause

A memory allocation failed. The system is low on memory or has a memory leak.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

CM-ZONE_DB_FAIL_3

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_3, 2, Bad object type type function_name
```

Probable cause

Data is corrupt in the zone database.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_4

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_4, 2, Invalid name or parameters function_name:
```

Probable cause

There is an illegal character or syntax error in a zone object name.

Recommended action

Check the object name syntax and retry the last action. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for information on proper syntax.

Severity

Error

CM-ZONE_DB_FAIL_5

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_5, 2, Send response failed function_name
```

Probable cause

An interprocess communication failure occurred, usually because of corrupt firmware.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_7

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_7, 2, Name object_name found, can't create entry with same  
name
```

Probable cause

An object with the same name already exists in the zone database.

Recommended action

Specify a unique name for the zone object and retry the last action.

Severity

Error

CM-ZONE_DB_FAIL_8

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_8, 2, Name object_name not found, can't operation_function
```

Probable cause

An illegal character or syntax error is in the object name.

Recommended action

Check the object name syntax and retry the last action. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for information on proper syntax.

Severity

Error

CM-ZONE_DB_FAIL_9

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_9, 2, Name name's type type doesn't match with one in zone
```

Probable cause

There is an illegal character or syntax error in the object name.

Recommended action

Check the object name syntax and retry the last action. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for information on proper syntax.

Severity

Error

CM-ZONE_DB_FAIL_10

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_10, 2, Name name already contains member-name
```

Probable cause

The member you are trying to add to the zone object is already a member in that object. The value *name* is the user-defined name for the zone database object.

Recommended action

No action is required.

Severity

Error

CM-ZONE_DB_FAIL_11

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_11, 2, Name member NOT in list
```

Probable cause

The member you are trying to remove from the zone object does not exist as a member in that object.

Recommended action

No action is required.

Severity

Error

CM-ZONE_DB_FAIL_12

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_12, 2, sl_init failed function_name
```

Probable cause

A string memory allocation failure occurred, which is usually caused by the system running low on memory or a memory leak.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_13

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_13, 2, sl_add failed function_name
```

Probable cause

A string memory allocation failure occurred, which is usually caused by the system running low on memory or a memory leak.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_14

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_14, 2, Internal zone db too big size can't fit into  
supported_size function_name
```

Probable cause

Too many objects or members in the zone database.

Recommended action

Delete excess objects or members from the zone database and retry the last action. Use the `zoneRemove` command to remove members from a zone. Use the `zoneDelete` command to remove unused zones from the zone database.

Severity

Error

CM-ZONE_DB_FAIL_15

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_15, 2, zone name has no member function_name
```

Probable cause

A zone is expected to have members while its aliases are being expanded.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_16

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_16, 2, Name name should be an ALIAS but not function_name
```

Probable cause

Zone database corruption.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

CM-ZONE_DB_FAIL_17

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_17, 2, saving the data base failed function_name
```

Probable cause

A save to the zone database failed, which is usually caused by either a corrupted zone database file or the system memory being full.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_18

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_18, 2, Failed to open file(file_name) function_name
```

Probable cause

The zone database file does not exist or was not found.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_19

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_19, 2, mmap failed function_name
```

Probable cause

The zone database file was not found or has an mmap error.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_20

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_20, 2, convert ascii to internal data structure failed  
function_name
```

Probable cause

An error was found in `/etc/rn_zone.db`.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_21

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_21, 2, unable to write function_name
```

Probable cause

The XPath OS cannot write to `/etc/rn_zone.db` to clear the file.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_22

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_22, 2, unable to seek function_name
```

Probable cause

The XPath OS cannot write to `/etc/rn_zone.db` to clear the file.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_23

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_23, 2, Bad zone_config_ptr or size function_name
```

Probable cause

Data corruption was found in the zone database.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_24

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_24, 2, map_zone_config_file failed function_name
```

Probable cause

Data corruption was found in the zone database.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_25

Message

```
process_id (EvtMgr): date time  
Critical CM-ZONE_DB_FAIL_25, 1, CSCN alloc failed function_name
```

Probable cause

Common Service Connection (CSCN) buffer allocation failed. The system might have a CSCN buffer leak.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

CM-ZONE_DB_FAIL_26

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_26, 2, member list too long function_name
```

Probable cause

The number of members for the specified zone object exceeds the zone database limit of 128 KB. This error occurs only while importing the configuration file during a `configDownload`.

Recommended action

Edit the configuration file to make the zone database smaller. When downloading a configuration, the zone database must be below 128 KB.

Severity

Error

CM-ZONE_DB_FAIL_27

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_27, 2, Merge failed, object type:name mbr list mismatch,  
cur:list, new:list function_name
```

Probable cause

A conflict occurred between zone objects when attempting to merge the local database with the configuration file databases. The conflict must be resolved before executing the `configDownload` command. The *object type* can be an alias, zone, zone set, Quickloop, or FAzone. The *name* value is the user-defined name for the zone object.

Recommended action

The message lists the zone object that caused the failure. Usually this indicates two different member lists for the same zone object when executing the `configDownload` command. An easy way to fix this problem is to delete the object in the configuration file before running the command.

Severity

Error

CM-ZONE_DB_FAIL_28

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_28, 2, Parse error: key=key value=value function_name
```

Probable cause

The admin is using incorrect syntax or illegal characters.

Recommended action

Verify that you are using proper syntax for the operation and retry the command. For more information on command syntax, see the *HP StorageWorks XPath OS 7.4.x command reference guide*.

Severity

Error

CM-ZONE_DB_FAIL_29

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_29, 2, Trying to enable zone (name) that doesn't exist  
function_name
```

Probable cause

The admin is trying to enable a zone that does not exist in the zone database.

Recommended action

No action is required.

Severity

Error

CM-ZONE_DB_FAIL_30

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_30, 2, value string too long function_name
```

Probable cause

The value string specified is longer than the allowed limit.

Recommended action

Retry the last action, specifying a shorter value string for the zone database object.

Severity

Error

CM-ZONE_DB_FAIL_31

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_31, 2, invalid parameter function_name
```

Probable cause

The admin is using an invalid character or syntax in the member list.

Recommended action

Verify that you are using proper syntax for the operation and retry the command. For more information on command syntax, see the *HP StorageWorks XPath OS 7.4.x command reference guide*.

Severity

Error

CM-ZONE_DB_FAIL_32

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_32, 2, file file_name does not exist. Not an error on 1st  
reboot after a new install function_name
```

Probable cause

The zone database does not exist on the switch. This is normal for the first reboot after new firmware has been installed; otherwise, it indicates a corrupt file system.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

CM-ZONE_DB_FAIL_33

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_33, 2, file file_name access error: errno:error_code  
function_name
```

Probable cause

A file access error occurred. This error can be caused by a corrupt file system or the file system running out of memory.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

CM-ZONE_DB_FAIL_34

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_34, 2, file file_name too big, bigger than size  
function_name
```

Probable cause

The resultant size of the zone database exceeds the supported limit.

Recommended action

Delete excess objects or members from the zone database and retry the last action. Use the `zoneRemove` command to remove members from a zone. Use the `zoneDelete` command to remove unused zones from the zone database.

Severity

Error

CM-ZONE_DB_FAIL_36

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_36, 2, reached EOF before last record is fully read, file  
maybe corrupted function_name
```

Probable cause

The zone database file is incomplete and has been corrupted.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

CM-ZONE_DB_FAIL_37

Message

```
process_id (EvtMgr): date time  
Error CM-ZONE_DB_FAIL_37, 2, failed to create group function_name
```

Probable cause

The XPath OS has run out of memory or experienced an internal error.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

Diagnostics messages

This section describes the Diagnostics (DIAG) system error messages.

DIAG-CSCN_FAIL

Message

```
process_id (diagd): date time  
Error DIAG-CSCN_FAIL, 2, function_name:cscn-api-name failed
```

Probable cause

An error was reported to the API.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

DIAG-DIAGAPI_FAIL

Message

```
process_id (diagd): date time  
Error DIAG-DIAGAPI_FAIL, 2, function_name:diag-api-name failed
```

Probable cause

An error was reported to the API.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

DIAG-MSG_ALLOC_FAIL

Message

```
process_id (diagd): date time  
Error DIAG-MSG_ALLOC_FAIL, 2, function_name:Can not allocate memory for message
```

Probable cause

A CSCN buffer allocation failure. The system might have a buffer leak.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB. If any daemon is running up to 10 MB or the `nsd` daemon shows above 50 MB, then there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the XPath OS.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Error

DIAG-MSG_SEND_FAIL

Message

```
process_id (diagd): date time  
Error DIAG-MSG_SEND_FAIL, 2, function_name:sb_send() failed
```

Probable cause

A CSCN transmit failure occurred. This might be a CSCN connection problem.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

DIAG-SYSAPI_FAIL

Message

```
process_id (diagd): date time  
Error DIAG-SYSAPI_FAIL, 2, function_name:cscn-api-name failed
```

Probable cause

An error was reported to the API.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

Fabric Control Daemon messages

This section describes the Fabric Control Daemon (FAB) system error messages.

FAB-CHA-ERR

Message

```
process_id (fabctl): date time  
Error FAB-CHA-ERR, 2, fabctl: Saved objid failed. Aborting save.
```

Probable cause

A fabric change error occurred. This condition is usually transitory.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

FAB-CSCN-ERR, fabctl: could not open wka driver

Message

```
process_id (fabctl): date time  
Critical FAB-CSCN-ERR, 1, fabctl: could not open wka driver
```

Probable cause

The WKA (well-known address) driver file is not available.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

FAB-CSCN-ERR, fabctl: could not open xbar control Q

Message

```
process_id (fabctl): date time  
Critical FAB-CSCN-ERR, 1, fabctl: could not open xbar control Q
```

Probable cause

A CSCN connection to xbar Control Q failed. Port-to-CM (port management frames) traffic that does not have an FC header is categorized as a Control Q frame.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

FAB-CSCN-ERR, fabctl: could not open xbar frame Q

Message

```
process_id (fabctl): date time
Critical FAB-CSCN-ERR, 1, fabctl: could not open xbar frame Q
```

Probable cause

A CSCN connection to xbar frame Q failed. The xbar frame Q handles all Fibre Channel well-known address frames, such as 0xFFFFFE, 0xFFFFFD, and 0xFFFCxx.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

FAB-CSCN-ERR, fabctl: Listen failed - FAB_SERV_DBG_PORT

Message

```
process_id (fabctl): date time
Error FAB-CSCN-ERR, 2, fabctl: Listen failed - FAB_SERV_DBG_PORT
```

Probable cause

A CSCN listen failure.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB. If any daemon is running up to 10 MB or the `nsd` daemon shows above 50 MB, there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the XPath OS.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Error

FAB-CSCN-ERR, fabctl: Listen failed - FAB_SERV_FC_PORT

Message

```
process_id (fabctl): date time
Error FAB-CSCN-ERR, 2, fabctl: Listen failed - FAB_SERV_FC_PORT
```

Probable cause

A CSCN listen failure occurred.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB. If any daemon is running up to 10 MB or the `nsd` daemon shows above 50 MB, there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the XPath OS.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Error

FAB-CSCN-ERR, fabctl: Listen failed - FAB_SERV_RCL_PORT

Message

```
process_id (fabctl): date time  
Error FAB-CSCN-ERR, 2, fabctl: Listen failed - FAB_SERV_RCL_PORT
```

Probable cause

A CSCN listen failure occurred.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB. If any daemon is running up to 10 MB or the `nsd` daemon shows above 50 MB, then there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the XPath OS.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Error

FAB-OUT-RESOURCES, fabctl: Context Alloc failed

Message

```
process_id (fabctl): date time  
Warning FAB-OUT-RESOURCES, 3, fabctl: Context Alloc failed "function_name"
```

Probable cause

A context resource allocation failed.

Recommended action

No action is required. The daemon resends the request.

Severity

Warning

FAB-OUT-RESOURCES, fabctl: MsgAlloc failed

Message

```
process_id (fabctl): date time
Error FAB-OUT-RESOURCES, 2, fabctl: MsgAlloc failed "function_name"
```

Probable cause

A memory resource is not available.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB. If any daemon is running up to 10 MB or the `nsd` daemon shows above 50 MB, then there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the XPath OS.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Error

FAB-SHM-ERR, Error: bad ckpt objid

Message

```
process_id (fabctl): date time
Error FAB-SHM-ERR, 2, Error: bad ckpt objid != SA_CHA_OBJID_RESERVED_SHMID
```

Probable cause

A shared memory restore operation failed.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

FAB-SHM-ERR, fabctl: signature not found

Message

```
process_id (fabctl): date time  
Error FAB-SHM-ERR, 2, fabctl: signature not found in the shared memory segment
```

Probable cause

The shared memory is not set properly.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

FAB-SHM-ERR, fabctl_get_shm: shmat failed.

Message

```
process_id (fabctl): date time  
Error FAB-SHM-ERR, 2, fabctl_get_shm: shmat failed. errno = errno
```

Probable cause

Shared memory is not set properly.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

FAB-SHM-ERR, fabctl_get_shm: shmget failed

Message

```
process_id (fabctl): date time  
Error FAB-SHM-ERR, 2, fabctl_get_shm: shmget failed
```

Probable cause

Shared memory for storing data is not available.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

FAB-SHM-ERR, fabctl_restore_state

Message

```
process_id (fabctl): date time
Error FAB-SHM-ERR, 2, fabctl_restore_state: shmat failed. errno = %d
```

Probable cause

A shared memory restore operation failed.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

FAB-ZONE-ERR

Message

```
process_id (fabctl): date time
Error FAB-ZONE-ERR, 2, fabctl: Open to ZSlib failed
```

Probable cause

The zone server library initialization failed because of an inability to set shared memory.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

Fibre Channel Router messages

This section describes the Fibre Channel Router (FCR) system error messages.

FCR-ISW (RDI)

Message

```
process_id (iswitchd): date time
Warning FCR-ISW, 3, pt number RDI retransmitted x times asking %d(%s) from
source_domain to dest_domain
```

Probable cause

An EX_Port needed to retransmit request domain ID (RDI) due to rejection or lack of response when the fabric was forming. This can be a sign that the fabric is not stable.

Recommended action

Troubleshooting can involve checking the physical health of the links, SFP transceivers, and switches in the fabric. Use commands, such as `fabricShow`, `topologyShow`, and `switchShow` to troubleshoot problems in the fabric.

Severity

Warning

FCR-ISW (RSCN)

Message

```
process_id (iswitchd): date time  
Warning FCR-ISW, 3, pt number RSCN retransmitted x times command of command from  
source_domain to dest_domain
```

Probable cause

An RSCN is being retransmitted for a device from an FCR switch. The source and destination domains are displayed in the message text. Valid values for `source_domain` and `dest_domain` are from 1 to 239.

Recommended action

An acknowledgement has not been received from the edge fabric for the RSCN retransmitted. Check the switch with the corresponding destination domain to verify that it is functioning properly.

Severity

Warning

FCR-ISW (NSS_GE_PT)

Message

```
process_id (iswitchd): date time  
Warning FCR-ISW, 3, pt number NSS_GE_PT retransmitted x times from  
source_domain to dest_domain
```

Probable cause

A Name Server request is being retransmitted. The source and destination domains are displayed in the message text. Valid values for `source_domain` and `dest_domain` are from 1 to 239.

Recommended action

A switch in the edge fabric is not responding to the GE_PT request. GE_PT is a switch-to-switch Name Server request.

1. Check the switch with the corresponding destination domain to verify that it is functioning properly.
2. Run the `switchShow` command, and examine the error log on the malfunctioning switch.

Severity

Warning

FCR-ISWFAB (malloc failed)

Message

```
process_id (iswitchd): date time  
Warning FCR-ISWFAB, 3, isw: malloc failed for value
```

Probable cause

A memory allocation failed. The system is low on memory or has a memory leak. The *value* is either a configuration, a zone, or an alias name.

Recommended action

If the problem persists, reboot the switch.

Severity

Warning

FCR-ISWFAB (group slots)

Message

```
process_id (iswitchd): date time  
Warning FCR-ISWFAB, 3, ran out of available group slots
```

Probable cause

The slots available for storing zoning information are filled to capacity.

Recommended action

Reduce the size of the zone database in the edge fabric by deleting all unused aliases, zones, and configurations.

Severity

Warning

FCR-ISW_ZN

Message

```
process_id (iswitchd): date time  
Warning FCR-ISW_ZN, 3, mem_num devices in lsanzone lsan_zone_name greater than the  
limit MAX_DEV_PER_LSAN_ZONE
```

Probable cause

The number of devices per LSAN zone exceeds the limit.

Recommended action

Reduce the size of the LSAN zone in the zone database of the edge fabric to be within the limit, by removing the unused zone members.

Severity

Warning

FCR-SHM_OPER (failed to attach shared memory)

Message

```
process_id (iswitchd): date time  
Error FCR-SHM_OPER, 2, Failed to attach Shared Memory = unix_error
```

Probable cause

The FCR failed to attach shared memory.

Recommended action

Reboot the switch.

Severity

Error

FCR-SHM_OPER (failed to get shared memory)

Message

```
process_id (iswitchd): date time  
Error FCR-SHM_OPER, 2, Failed to get Shared memory = value
```

Probable cause

The FCR failed to get shared memory.

Recommended action

Reboot the switch.

Severity

Error

FCR-TIMER

Message

```
process_id (iswitchd): date time  
Error FCR-TIMER, 2, isw_start_timer: func (0x_hex) not in saved table
```

Probable cause

The FCR has an incorrect function pointer.

Recommended action

If the FCR is stable, this message can be ignored. If the message persists, reboot the switch.

Severity

Error

FCR-ISW

Message

```
process_id (iswitchd): date time  
Warning FCR-ISW, 3, Ran out of trapped ELS slots dfid dfid sfid sfid did did sid  
sid ox_id ox_id
```

Probable cause

Resources for saving a copy of an ELS (extended link services) command are not available. This problem is usually transient, and might not require user action. The message acronyms are:

- dfid: Destination fabric ID
- sfid: Source fabric ID
- did: Destination device ID
- sid: Source device ID
- ox_id: Exchange ID

Recommended action

ELS commands that cross the router and need modifications cannot be handled at the moment. Hosts usually retry the operations and recover. If the host (sid) is not able to discover all targets across the FCR, disable and re-enable the port where the host is connected in the edge fabric to force a rediscover operation from the host.

Severity

Warning

FCR-WKA

Message

```
process_id (iswitchd): date time  
Error FCR-WKA, 2, isw: could not open xbar frame Q queue
```

Probable cause

The connection to the xbar frame queue failed. The xbar is the kernel module that sends and receives information on ports. The xbar frame queue handles all Fibre Channel well-known address frames, such as 0xFFFFFE, 0xFFFFFD, and 0xFFFCxx.

Recommended action

Reboot the switch.

Severity

Error

Management Server messages

This section describes the Management Server (MS) system error messages.

MS-CSCN_CN_FAIL, Connection to SB failed

Message

```
process_id (msd): date time  
Critical MS-CSCN_CN_FAIL, 1, Connection to SB failed
```

Probable cause

The connection to the switchboard daemon failed.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

MS-CSCN_CN_FAIL, Connection to XBAR failed

Message

```
process_id (msd): date time  
Critical MS-CSCN_CN_FAIL, 1, Connection to XBAR failed
```

Probable cause

The connection to the xbar daemon failed.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

MS-CSCN_CN_FAIL, Error sending msg to SB

Message

```
process_id (msd): date time  
Critical MS-CSCN_CN_FAIL, 1, Error sending msg to SB
```

Probable cause

An error occurred while sending a message to the switchboard. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Reboot the MP Router if you see this message several times.

Severity

Critical

MS-OUT_RESOURCES

Message

```
process_id (msd): date time  
Error MS-OUT_RESOURCES, 2, [ms_svr_register_sb]: Malloc failed
```

Probable cause

A memory allocation failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting E_Port object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting E_Port object failed for port n
```

Probable cause

A request for E_Port information failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting FcPortInfo object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting FcPortInfo object failed for port n
```

Probable cause

A request for FC parameters failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting LinkAdminStatus object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting LinkAdminStatus object failed for port n
```

Probable cause

A request for link admin status failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting portAdmin object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting portAdmin object failed for port n
```

Probable cause

A request for port admin status failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting portOpStatus object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting portOpStatus object failed for port n
```

Probable cause

A request for port status failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the last operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting portOpType object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting portOpType object failed for port n
```

Probable cause

A request for port type failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the last operation. Reboot or power cycle the MP Router.

Severity

Error

MS-PORT_OBJECT, Getting portType object failed

Message

```
process_id (msd): date time  
Error MS-PORT_OBJECT, 2, Getting portType object failed for port n
```

Probable cause

A request for port type failed. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the last operation. Reboot or power cycle the MP Router.

Severity

Error

MS-SHM_OPER, Failed to allocate Shared Memory

Message

```
process_id (msd): date time  
Critical MS-SHM_OPER, 1, Failed to allocate Shared Memory
```

Probable cause

A request to allocate shared memory failed.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem is not fixed with a reboot, use the `firmwareDownload` command to download a new version of the firmware.

Severity

Critical

MS-SHM_OPER, Failed to attach I2C Shared Memory

Message

```
process_id (msd): date time  
Critical MS-SHM_OPER, 1, Failed to attach I2C Shared Memory
```

Probable cause

A request to attach I2C shared memory failed.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem is not fixed with a reboot, use the `firmwareDownload` command to download a new version of the firmware.

Severity

Critical

MS-SHM_OPER, Failed to attach Shared Memory

Message

```
process_id (msd): date time  
Critical MS-SHM_OPER, 1, Failed to attach Shared Memory
```

Probable cause

A request to attach shared memory failed.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem is not fixed with a reboot, use the `firmwareDownload` command to download a new version of the firmware.

Severity

Critical

MS-SHM_OPER, Failed to get I2C Shared Memory

Message

```
process_id (msd): date time  
Critical MS-SHM_OPER, 1, Failed to get I2C Shared Memory
```

Probable cause

A request to get I2C shared memory failed.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem is not fixed with a reboot, use the `firmwareDownload` command to download a new version of the firmware.

Severity

Critical

MS-SIGNAL

Message

```
process_id (msd): date time  
Critical MS-SIGNAL, 1, Received SIGTERM: Mgmt server exiting
```

Probable cause

The Management Server received a SIGTERM (signal termination) error. The Management Server fails.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

MS-SWITCH_OBJECT, ms_fetch_port_parameter

Message

```
process_id (msd): date time  
Error MS-SWITCH_OBJECT, 2, ms_fetch_port_parameter: Getting SwitchInfo  
failed
```

Probable cause

An error occurred trying to fetch port parameters. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

MS-SWITCH_OBJECT, ms_init_cscn: Getting FabricInfo failed

Message

```
process_id (msd): date time  
Error MS-SWITCH_OBJECT, 2, ms_init_cscn: Getting FabricInfo failed
```

Probable cause

An error occurred trying to fetch fabric related information. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

MS-SWITCH_OBJECT, ms_init_cscn: Getting SwitchInfo failed

Message

```
process_id (msd): date time  
Error MS-SWITCH_OBJECT, 1, ms_init_cscn: Getting SwitchInfo failed
```

Probable cause

An error occurred trying to fetch switch information. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

MS-SWITCH_OBJECT, ms_init_cscn: Getting SwitchName failed

Message

```
process_id (msd): date time  
Critical MS-SWITCH_OBJECT, 1, ms_init_cscn: Getting SwitchName failed
```

Probable cause

A request for the MP Router name failed.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

MS-SWITCH_OBJECT, ms_init_cscn: Getting SwitchParams failed

Message

```
process_id (msd): date time  
Error MS-SWITCH_OBJECT, 2, ms_init_cscn: Getting SwitchParams failed
```

Probable cause

An error occurred trying to fetch switch settings. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Reboot or power cycle the MP Router.

Severity

Error

MS-WKA_INIT

Message

```
process_id (msd): date time  
Critical MS-WKA_INIT, 1, WKA init failed
```

Probable cause

The WKA (well-known address) kernel module failed to initialize or is not accepting connection from the Management Server.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

Switch Access Layer messages

This section describes the Switch Access Layer (SWAL) system error messages.

SWAL-CSCN_RX_FAILURE

Message

```
process_id (module_name): date time  
Critical SWAL-CSCN_RX_FAILURE, 1, Fail to recv for process: function_name  
file_name line_number
```

Probable cause

The CSCN module has not received a response from the client for 30 seconds. This usually indicates:

- The client is not responding.
- The CSCN connection to the client is broken.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

SWAL-CSCN_TX_FAILURE

Message

```
process_id (module_name): date time  
Critical SWAL-CSCN_TX_FAILURE, 1, Fail to send for process function_name  
file_name line_number
```

Probable cause

A CSCN transmit failure occurred. There might be a CSCN connection problem.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

SWAL-FCR_API_CSCN, Error sending data

Message

```
process_id (module_name): date time  
Warning SWAL-FCR_API_CSCN, 3, Error sending data to FCR
```

Probable cause

An error occurred trying to send information to the iswitchd daemon. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Warning

SWAL-FCR_API_CSCN, Error receiving data

Message

```
process_id (module_name): date time  
Warning SWAL-FCR_API_CSCN, 3, Error receiving data from FCR
```

Probable cause

An error occurred trying to send information to the iswitchd daemon. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Warning

SWAL-FCR_API_CSCN, Open to ISWITCHD failed

Message

```
process_id (module_name): date time  
Error SWAL-FCR_API_CSCN, 2, Open to ISWITCHD failed
```

Probable cause

An error occurred trying to connect to the iswitchd daemon. Typically, this problem is resolved without user intervention. It can be ignored unless seen repeatedly.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

SWAL-MALLOC_FAILURE

Message

```
process_id (module_name): date time  
Critical SWAL-MALLOC_FAILURE, 1, Malloc failed: function_name file_name  
line_number
```

Probable cause

A SWAL memory allocation failure occurred. The system is low on memory or has a memory leak.

Recommended action

1. Use the `top` command to look for a memory leak.
The `top` command displays memory usage on the switch and the daemons running. Most daemons should show approximately 1 MB. The `nsd` daemon typically shows 30 MB. If any daemon is running up to 10 MB or the `nsd` daemon shows above 50 MB, then there might be memory leak.
2. Check the last value in the memory line of the `top` command output for system free space.
This value varies, depending on configuration, but should be approximately 800 MB free. A memory leak usually indicates a problem with the XPath OS.
3. Contact your switch supplier for an updated version of the XPath OS. Use the `firmwareDownload` command to update the firmware.

Severity

Critical

SWAL-MS_API_CSCN (open to MS failed)

Message

```
process_id (module_name): date time
Error SWAL-FCR_API_CSCN, 2, Open to MS failed
```

Probable cause

A connection to the Management Server failed. Either the MS daemon crashed or the system is out of resources. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

SWAL-MS_API_CSCN (error sending data to MSD)

Message

```
process_id (module_name): date time
Error SWAL-FCR_API_CSCN, 2, Error sending data to MSD
```

Probable cause

A request to the MSD daemon failed. Either the MSD daemon crashed or the system is out of resources. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

SWAL-MS_API_CSCN (error receiving data from MSD)

Message

```
process_id (module_name): date time
Error SWAL-FCR_API_CSCN, 2, Error receiving data from MSD
```

Probable cause

A response from the MSD daemon failed. Either the MSD daemon crashed or the system is out of resources. Typically, this problem is resolved without user intervention.

Recommended action

Wait a few minutes and retry the operation. Reboot or power cycle the MP Router.

Severity

Error

SWAL-SB_INIT_FAILURE

Message

```
process_id (module_name): date time  
Critical SWAL-SB_INIT_FAILURE, 1, Connection to SB failed: function_name  
file_name line_number
```

Probable cause

An error was encountered when initializing the CSCN connection to the SB. This is a rare message, and might indicate a problem with the XPath OS firmware. The functions that might be affected are:

- SwFmXferInforPvt
- SwFmXferInforPvtData

Recommended action

Use the `firmwareDownload` command to update the firmware and reboot the MP Router. For instructions on how to download new firmware, see the *HP StorageWorks XPath OS 7.4.x administrator guide*.

Severity

Critical

Zone module messages

This section describes the Zone module (ZONE) system error messages.

ZONE-CSCN_ALLOC_FAIL

Message

```
process_id (zsd): date time  
Critical ZONE-CSCN_ALLOC_FAIL, 1, CSCN buffer alloc failed function_name
```

Probable cause

A CSCN buffer allocation failed. The system might have a CSCN buffer leak. The functions that might be affected are:

- sb_alloc
- zs_send_brcdcmnd_tons
- zs_send_cscn
- zs_send_cscnmsg
- zs_send_disable_tons
- zs_send_enable_tons

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

ZONE-CSCN_CN_FAIL

Message

```
process_id (zsd): date time  
Critical ZONE-CSCN_CN_FAIL, 1, CSCN initialization for interface/client failed
```

Probable cause

A problem occurred while initializing the ZSD zone daemon and establishing a CSCN connection with the interface or client process. This message usually indicates an XPath OS firmware problem. The interfaces or clients that might be affected are:

- nscli_connect
- sb_connect
- sb_connect_comp
- zs_cha_cb
- zs_init_cscn

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

ZONE-CTX_FAIL

Message

```
process_id (zsd): date time  
Error ZONE-CTX_FAIL, 2, Unable to get the CMD Context
```

Probable cause

The command context is missing for the response. This message usually indicates an XPath OS firmware problem.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Error

ZONE-SHM_MALLOC

Message

```
process_id (zsd): date time  
Critical ZONE-SHM_MALLOC, 1, Shared memory allocation failed
```

Probable cause

A problem occurred while initializing the ZSD zone daemon and shared memory allocation. This message usually indicates an XPath OS firmware problem.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

ZONE-SWAL_INIT

Message

```
process_id (zsd): date time  
Critical ZONE-SWAL_INIT, 1, SWAL Initialization fails function_name
```

Probable cause

A problem occurred while initializing the SWAL daemon and establishing the CSCN connection for zone commands. This message usually indicates an XPath OS firmware problem.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

ZONE-XBAR_INIT

Message

```
process_id (zsd): date time  
Critical ZONE-XBAR_INIT, 1, XBAR init fails
```

Probable cause

A problem occurred initializing the ZSD zone daemon and establishing an xbar connection. This message usually indicates an XPath OS firmware problem.

Recommended action

Reboot or power cycle the MP Router.

Severity

Critical

ZONE-ZONE_NOLICENSE

Message

```
process_id (zsd): date time  
Info ZONE-ZONE_NOLICENSE, 4, Missing required license
```

Probable cause

The required zoning license is missing.

Recommended action

Use the `licenseAdd` command to install the zoning license. For more information on installing a license, see the *HP StorageWorks XPath OS 7.4.x administrator guide*.

Severity

Info

ZONE-ZSD_MALLOC

Message

```
process_id (zsd): date time  
Critical ZONE-ZSD_MALLOC, 1, mallocate failed zone command/function_name
```

Probable cause

A memory allocation failed. The system is low on memory or has a memory leak. The function or zone commands that might be affected are:

- `cfgupdate`
- `convertport`
- `generate_zone_event`
- `memconvert`
- `pidconvert`
- `sb_msg_rcv`
- `zs_brcd_ckactive`
- `zs_brcd_collate_data`
- `zs_brcd_collate_data`
- `zs_ckqllop`
- `zs_ckzoneforql`
- `zs_create_memlist`
- `zs_getactivezoneset`
- `zs_getactivezonesetname`
- `zs_getmemberlist`
- `zs_getobjlist`
- `zs_getzonecapabilities`
- `zs_getzonelist`
- `zs_getzonememberlist`
- `zs_getzonesetlist`
- `zs_process_brcd_ils_resp`
- `zs_send_xbarframe`
- `zs_svr_msg_rcv`

- `zs_update_brcd_zoneinfo`
- `zsbrcdcmd_timer`
- `zslib_activebrcd`
- `zslib_addlist`
- `zslib_build_activebrcd`
- `zslib_replace_alias`
- `zslib_update_brcdpacket_todb`

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

ZONE-ZSD_MEMBERS

Message

```
process_id (zsd): date time
Warning ZONE-ZSD_MEMBERS, 3, The num of members exceeds 4096
```

Probable cause

The maximum number of members for a zone (4096) has been exceeded.

Recommended action

Delete excess members and retry the failed operation.

Severity

Warning

ZONE-ZSD_SHM

Message

```
process_id (zsd): date time
Critical ZONE-ZSD_SHM, 1, Failed to get the Shared Memory allocated by zone server
```

Probable cause

A problem occurred initializing the ZSD zone daemon and allocating shared memory. This message usually indicates a problem with the XPath OS firmware.

Recommended action

1. Reboot or power cycle the MP Router.
2. If the problem persists, run the `firmwareDownload` command to upgrade the firmware.

Severity

Critical

ZONE-ZSD_ZONE

Message

```
process_id (zsd): date time  
Warning ZONE-ZSD_ZONE, 3, The num of zones exceeds 1024
```

Probable cause

The maximum number of zones (1024) has been exceeded.

Recommended action

Delete excess zones and retry the last commit operation.

Severity

Warning

Port log messages

This section documents all messages displayed by the `portLogShow` command.

The XPath OS maintains an internal port log of all port activity. Port log captures the control messages that traverse the central processor and does not log any data traffic that gets switched at the port level. The port log stores entries for each port as a circular buffer. Each port has space to store 2,048 log entries. Once the log is full, the newest log entries overwrite the oldest ones. Port Logs are not persistent and are lost over power-cycles and reboots.

Port log management

Use the commands in [Table 9](#) to view and manage port logs.

Table 9 Commands for port log management

Command	Description
<code>portLogClear</code>	Clears all port logs or particular ports.
<code>portLogDisable</code>	Disables port logs for all or particular ports.
<code>portLogDump</code>	Displays port logs for all or particular ports without page breaks.
<code>portLogEnable</code>	Enables port logs for all or particular ports.
<code>portLogShow</code>	Displays port logs for all or particular ports with page breaks.

See the *HP StorageWorks XPath OS 7.4.x command reference guide* for detailed information on these commands.

Port log field descriptions

The following is an example portLogShow command:

```
FabricAP:admin> portLogShow 8
Total records present      = 12
Number of records displayed = 12
```

Time	Module	Event	Port	Len	Log info
18:36:52.036	fabctl	PrtSCN	08	0	st=1, Topo=2, Spd=0
18:36:52.361	WKA	Rx	08	140	22fffffe,00000000,01a6ffff,04000000
18:36:52.362	fabctl	PrtSCN	08	0	st=2, Topo=2, Spd=2
18:36:52.365	fabctl	Debug	08	0	Loading routes
18:36:52.379	fabctl	Tx	08	140	23640800,00fffffe,01a60001,02000000
18:36:52.379	WKA	Rx	08	140	22fffffc,00640800,02ceffff,03000000
18:36:52.382	nsd	Tx	08	140	23640800,00fffffc,02ceffff,02000000
18:36:52.382	WKA	Rx	08	32	22fffffd,00640800,02cdffff,62000000
18:36:52.383	fabctl	Tx	08	28	23640800,00fffffd,02cd0001,02000000
18:36:52.383	WKA	Ct_in	08	52	02fffffc,00640800,02dlffff,01000000
18:36:52.384	nsd	Tx	08	40	03640800,00fffffc,02dlffff,01000000
18:36:52.384	WKA	Ct_in	08	84	02fffffc,00640800,02d0ffff,01000000

The following fields appear in the portLogShow command output:

- Time: Date and time of the event.
- Module: Name of the module that logged the event. See ["Port log modules"](#) on page 109 for more information.
- Event: Possible events include:
 - PrtDis: Port disabled.
 - PrtEnab: Port enabled.
 - PrtStart: Port start.
 - PrtStop: Port stop.
 - PrtSCN: Port state change.
 - IOCTL: I/O control (IOCTL) execution context.
 - Tx: Frame transmitted.
 - Tx_Ack1: ACK_1 transmitted.
 - Rx_LC: Received a link control frame.
 - Rx_Ack1: Received ACK_1.
 - Ct_in: Received a common transport (CT)-based request.
 - Ct_out: Transmitted a CT-based response.
 - nbr_sm: FSPF's neighbor state machine state transition.
 - RSCN: RSCN transmitted.
 - SWRSCN: Switch RSCN transmitted.
 - Debug: Debug information.
- Port: Port number of the effected port.
- Len: Frame length; 0 for nonframe-related log entries.
- Log Info: Log record information. The log record might be in string format (for example, in PrtSCN event) or a list of integers (for example, Tx/Rx events).

Port log modules

The following are the modules that log messages to the port log:

- Debug: Used by any module to add debug port log messages.
- fabctl: Fabric Controller. Along with fabric controller functions, Login Server, FSPF, and Zone merge code runs in this program's context.
- nsd: Name Server.
- msd: Management Server.
- zsd: Zone Server.
- rcsd: RCS daemon.
- iswitchd: FCR daemon.
- fc_port: FC port code.
- fcipPort: FCIP port code.
- iscsiPrti: SCSI port code.
- csmsg: Common services messaging service.
- WKA: Well-known-address pseudo driver.
- evntmgr: Event Manager.
- iomctlr: IO module controller daemon.
- cpmgr: Card/port manager.
- itdi: SCSI target daemon.

Port log message descriptions

The port log entries in this section are identified by their Module, Event, and Log Info fields and are alphabetized by module name. All port log messages are for information only; no action is required.

csmsg, DRV, Got Routes

Port Log message

```
time csmsg DRV port len Got Routes=domain;domain
```

Probable cause

Provides a list of valid routes, in domain list format.

Recommended action

No action is required.

Severity

Info

csmsg, IOCTL, Got Routes

Port Log message

```
time csmsg IOCTL port len Got Routes=domain;domain
```

Probable cause

Provides a list of valid domains, in domain list format.

Recommended action

No action is required.

Severity

Info

csmmsg, IOCTL, local domain

Port Log message

```
time csmmsg IOCTL port len local domain = domainID
```

Probable cause

This message displays the domain ID of the MP Router and is generated during boot up or when the domain ID changes.

Recommended action

No action is required.

Severity

Info

csmmsg, IOCTL, Switch PID Format

Port Log message

```
time csmmsg IOCTL port len Switch PID Format = PID_format
```

Probable cause

This message displays the MP Router PID format. The supported PID formats are 1 for Core PID or 2 for Displaced PID. This message is generated during boot up or when the PID is changed.

Recommended action

No action is required.

Severity

Info

fabctl, csmmsg, local domain

Port Log message

```
time fabctl csmmsg port len local domain = domain
```

Probable cause

This message provides the local domain ID value received by the csmmsg driver. This message is generated during boot up or when the domain ID changes.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, distrib routes End

Port Log message

```
time fabctl Debug port len distrib routes End
```

Probable cause

This message provides the end of route calculation by FSPF.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, distrib routes start

Port Log message

```
time fabctl Debug port len distrib routes start
```

Probable cause

This message provides the start of route calculation by FSPF.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, dls= iod= trunk=

Port Log message

```
time fabctl Debug port len dls=x, iod=y, trunk=z
```

Probable cause

This message provides the configured dynamic load sharing (dls), in order delivery (iod), and trunk flag settings. A value of 1 means enabled, and a value of 0 means disabled. These values can be viewed using `dlsShow`, `iodShow`, and `trunkShow`. See the *HP StorageWorks XPath OS 7.4.x command reference guide* for more information on these commands.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:Init to Init

Port Log message

```
time fabctl Debug port len fabSm:Init to Init.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:Init to LinkSt

Port Log message

```
time fabctl Debug port len fabSm:Init to LinkSt.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:LinkSt to Init

Port Log message

```
time fabctl Debug port len fabSm:LinkSt to Init.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:LinkSt to SendELP

Port Log message

```
time fabctl Debug port len fabSm:LinkSt to SendELP.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:ProcessESC to RDIWait

Port Log message

```
time fabctl Debug port len fabSm:ProcessESC to RDIWait.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:SendELP to SendELP

Port Log message

```
time fabctl Debug port len fabSm:SendELP to SendELP.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fabSm:Unknown State to Init

Port Log message

```
time fabctl Debug port len fabSm:Unknown State to Init.L=line
```

Probable cause

This message provides the fabric controller state machine transitions. The *line* variable is for internal use only.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, Flood BF Initiated

Port Log message

```
time fabctl Debug port len Flood BF Initiated
```

Probable cause

This message provides the initiation of a build fabric SW_ILS command.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, Frame dropped

Port Log message

```
time fabctl Debug port len Frame dropped ls=linkstatus T=porttype
```

Probable cause

A received frame was dropped because the port is in offline state.

The *linkstatus* values can be:

- 1 - Offline
- 2 - Online
- 3 - Disabled

The *porttype* values can be:

- 0 - Type unknown
- 1 - FC port
- 0x7f - port disabled

Recommended action

No action is required.

Severity

Info

fabctl, Debug, FSPF ILS

Port Log message

```
time fabctl Debug port len FSPF ILS 0xhex drpd. Dom unconf
```

Probable cause

The received SW_ILS frame destined for FSPF (either HELLO(0x14), LSU(0x15) or LSA(0x16)) was dropped because the domain ID is unconfirmed (fabric formation after a BF has not completed yet).

Recommended action

No action is required.

Severity

Info

fabctl, Debug, fspfAgeLSRs

Port Log message

```
time fabctl Debug port len fspfAgeLSRs
```

Probable cause

In FSPF, every 60 seconds, the firmware ages all the non-local LSRs (Link State Records) in the LSR database and removes any stale state records that are more than 60 minutes old and have not been updated. So that the log is not overwhelmed with notifications, this function is logged only once every 12 times it is invoked.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, Invalid xbar cmd

Port Log message

```
time fabctl Debug port len Invalid xbar cmd 0xhex
```

Probable cause

The fabctl daemon received an invalid (unsupported) SW_ILS command.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, Loading routes

Port Log message

```
time fabctl Debug port len Loading routes
```

Probable cause

FSPF routes are getting loaded to the port.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, Loading routes for ip

Port Log message

```
time fabctl Debug port len Loading routes for ip
```

Probable cause

FSPF routes are being loaded for a specific ingress port (ip).

Recommended action

No action is required.

Severity

Info

fabctl, Debug, routes purged

Port Log message

```
time fabctl Debug port len routes purged
```

Probable cause

FSPF routes were purged from the port. This action typically occurs before route reload.

Recommended action

No action is required.

Severity

Info

fabctl, Debug, SW_ILS

Port Log message

```
time fabctl Debug port len SW_ILS command dropped !EPort(T:hexvalue)
```

Probable cause

An SW_ILS received on a non-E-Port was dropped. Log prints the SW_ILS command and current port mode. Possible values for port mode are:

- #define FL_PORT0x10
- #define F_PORT0x11
- #define E_PORT0x12
- #define ISOLATED_E_PORT0x13
- #define G_PORT0x14
- #define EPORT_ZONE_CONFLICT0x15
- #define EPORT_NO_ZONE_LICENSE0x16
- #define EPORT_DOMAIN_ID_CLASH0x17
- #define EPORT_INCOMP_FLOWCTRL0x18
- #define EPORT_DISABLED 0x19
- #define PORT_LOOPBACK0x1A

Recommended action

No action is required.

Severity

Info

fabctl, Debug, WAN_TOV=, Max_hop=

Port Log message

```
time fabctl Debug port len WAN_TOV=xx, Max_hop=xx
```

Probable cause

This message provides the WAN_TOV (wide area network time out value) and Max_hop count settings. See the `configure` command in the *HP StorageWorks XPath OS 7.4.x command reference guide* for more information these settings.

Recommended action

No action is required.

Severity

Info

fabctl, nbr_sm

Port Log message

```
time fabctl nbr_sm port len state to state
```

Probable cause

This message provides the state transition in the FSPF neighbor state machine. The possible states are:

- Unknown
- Down
- Init
- DBExch
- DBAckWait
- DBWait
- Full

Recommended action

No action is required.

Severity

Info

fabctl, prtSCN, st= Topo= Spd=

Port Log message

```
time fabctl prtSCN port len st=port_status, Topo=topo, Spd=speed_value
```

Probable cause

This message provides the port state change; the port either came online or went offline. The log entry displays the new port status (ONLINE/OFFLINE), Topology (P2P/LOOP), and link Speed (1G/2G).

Recommended action

No action is required.

Severity

Info

fabctl, RSCN, Fmt= ID= L=

Port Log message

```
time fabctl RSCN port len Fmt=rscn_format, ID=portidhex, L=payload_length
```

Probable cause

Specifies the RSCN Format, port ID and payload length. Possible values for the RSCN format are:

- #define RSCN_PORTID_FORMAT 0x0
- #define RSCN_AREA_FORMAT0x1
- #define RSCN_DOMAIN_FORMAT0x2
- #define RSCN_FABRIC_FORMAT0x3

Recommended action

No action is required.

Severity

Info

fabctl, SWRSCN

Port Log message

```
time fabctl SWRSCN port len Fmt=rscn_format, ID=portid_hex, L=payload_length
```

Probable cause

This message specifies the SWRSCN format, affected Port ID and port status. The port status values are:

- #define AFFECTED_N_PORT_ONLINE 0x1
- #define AFFECTED_N_PORT_OFFLINE0x2

Recommended action

No action is required.

Severity

Info

fabctl, Tx

Port Log message

```
time fabctl Tx port len 02ffffff,00ffffff,10ecffff, first_word_of_payload
```

Probable cause

This message provides a frame transmitted from fabctl. The first three words (word 0, word 1, and word 4) are displayed along with the first word of the payload.

Recommended action

No action is required.

Severity

Info

nsd, Ct_out, ns query acc

Port Log message

```
time nsd Ct_out port len ns query acc CT_REQUEST number_of_entries
```

Probable cause

A valid Name Server reply was sent. The first value is the CT_REQUEST and the second value is the number of entries in the reply; `nsd` stands for the Name Server daemon. This is the largest daemon running on the system (typically about 30 MB).

Recommended action

No action is required.

Severity

Info

nsd, Ct_out, ns query rjt

Port Log message

```
time nsd Ct_out port len ns query rjt CT_command
```

Probable cause

A Name Server query was rejected. The CT command that was rejected is displayed; `nsd` stands for the Name Server daemon. This is the largest daemon running on the system (typically about 30 MB).

Recommended action

No action is required.

Severity

Info

nsd, Debug, got portdown for port

Port Log message

```
time nsd RSCN port len got portdown for port=port_number
```

Probable cause

The Name Server reports a port link down message; `nsd` stands for the Name Server daemon. This is the largest daemon running on the system (typically about 30 MB).

Recommended action

No action is required.

Severity

Info

nsd, RSCN, rscn: to DDAAPP pld FFddaapp # N

Port Log message

```
time nsd RSCN port len rscn: to DDAAPP pld FFddaapp # N
```

Probable cause

The Name Server generated an RSCN to the local device `DDAAPP`; `nsd` stands for the Name Server daemon. This is the largest daemon running on the system (typically about 30 MB). The `DDAAPP` represents the (domain:areaID:AL_PA) of the recipient of the RSCN, and `FF` is the format of the RSCN (00 - port ID format, 01 - area format, 02 - domain format, 03 - fabric format), and `ddaapp` is the affected ID, `N` is the number of pages coalesced in the payload (only the contents of the first page are displayed in `FFddaapp`).

Recommended action

No action is required.

Severity

Info

nsd, RSCN, ns rscn gen

Port Log message

```
time nsd RSCN port len ns rscn gen
```

Probable cause

This message provides the RSCN generated due to local device coming online, fabric reformation, or zone configuration change. Log indicates the RSCN format and the affected Port ID (if applicable). The first byte indicates the RSCN format:

- RSCN_PORTID_FORMAT0x0
- RSCN_AREA_FORMAT0x1
- RSCN_FABRIC_FORMAT0x3

Bytes 1–3 indicate the affected Port ID.

Note that `nsd` stands for the Name Server daemon. This is the largest daemon running on the system (typically about 30 MB).

Recommended action

No action is required.

Severity

Info

WKA, Ct_in

Port Log message

```
time WKA Ct_in port len 1stword_fc_hdr,2ndword_fc_hdr,5thword_fc_hdr,  
first_word_of_payload  
time WKA Ct_in port len ct_hdr_word2, ct_hdr_word3, ct_hdr_word4,  
[ct_payload_word1-3]
```

Probable cause

The well-known address driver received a CT (Common Transport) frame.

Line 1: Indicates that the well-known-address daemon received a CT Frame. Fields logged are:

- First word of FC header (R_CTL, destination address)
- Second word of FC header (CS_CTL, source address)
- Fifth word of FC header (OX_ID, RX_ID)
- First word of the payload (first word of CT header)

Line 2: Fields logged are:

- Second word of CT header
- Third word of CT header
- Forth word of CT header
- If present, CT payload word 1 to word 3

Recommended action

No action is required.

Severity

Info

WKA, Debug, dest_q_calc

Port Log message

```
time WKA Debug port len dest_q_calc: 0 pl_len!
```

Probable cause

This message specifies an attempt to classify an incoming frame with 0 payload length, based on the command type.

Recommended action

No action is required.

Severity

Info

WKA, Debug, destq calc failed

Port Log message

```
time WKA Debug port len destq calc failed 6words_FCheader 6words_payload
```

Probable cause

The Fabric OS was unable to find a matching recipient for an incoming frame. The output displays an integer dump of:

- The first six words from the FC header.
- From one to six words from the payload. The payload line is present only if a payload exists.

Recommended action

No action is required.

Severity

Info

WKA, Debug, fill_hdr failed

Port Log message

```
time WKA Debug port len fill_hdr failed 6words_irh 6words_FCheader 6words_payload
```

Probable cause

A frame to be transmitted was dropped due to lack of routes to the destination domain. This situation can happen transiently during fabric reformation and route recalculation. The output displays an integer dump of:

- The first six words from the internal routing header.
- The first six words from the FC header.
- From one to six words from the payload. The payload line is present only if a payload exists.

Recommended action

No action is required.

Severity

Info

WKA, Debug, No ox_id

Port Log message

```
time WKA Debug port len No ox_id:sid=sid,did=did,ox_id=ox_id
```

Probable cause

An attempt to get a placeholder to store the exchange ID (ox_ID), which is used for handling an multi-frame sequence, failed.

Recommended action

No action is required.

Severity

Info

WKA, Debug, sendbackrcvdmmsg failed

Port Log message

```
time WKA Debug port len sendbackrcvdmmsg failed 6words_FCheader 6words_payload
```

Probable cause

The Fabric OS was unable to send a received frame up the kernel stack to the user space due to resource allocation issues. The output displays an integer dump of:

- The first six words from the FC header.
- From one to six words from the payload. The payload line is present only if a payload exists.

Recommended action

No action is required.

Severity

Info

WKA, Debug, Send msg failed

Port Log message

```
time WKA Debug port len Send msg failed 6words_WKAh 6words_irh 6words_FCheader 6words_payload
```

Probable cause

Fabric OS was unable to send a received frame up the kernel stack to the user due to some resource allocation issues. The output displays an integer dump comprising:

- The first six words from an internal WKA header.
- The first six words from the internal routing header.
- The first six words from the FC header.
- From one to six words from the payload. The payload line is present only if a payload exists.

Recommended action

No action is required.

Severity

Info

WKA, Rx, No dest_q

Port Log message

```
time WKA Rx port len No dest_q:did=did,sid=sid,ox_id=ox_id
```

Probable cause

Fabric OS was unable to find a matching recipient for:

- An abort basic link service (ABTS) for a earlier single-frame sequence command
- A multiframe sequence frame

Recommended action

No action is required.

Severity

Info

WKA, Rx

Port Log message

```
time WKA Rx port len 02fffffd,00fffffd,11d5ffff, first_word_of_payload
```

Probable cause

The well-known-address daemon sent a frame.

Fields logged are:

- First word of FC header (R_CTL, destination address)
- Second word of FC header (CS_CTL, source address)
- Fifth word of FC header (OX_ID, RX_ID)
- First word of the payload

Recommended action

No action is required.

Severity

Info

WKA, Rx_Ack1

Port Log message

```
time WKA Rx_Ack1 port len 02ffffff,00ffffff,11d5ffff, first_word_of_payload
```

Probable cause

The well-known-address daemon sent a CT frame.

Fields logged are:

- First word of FC header (R_CTL, destination address)
- Second word of FC header (CS_CTL, source address)
- Fifth word of FC header (OX_ID, RX_ID)
- First word of the payload

Recommended action

No action is required.

Severity

Info

WKA, Tx_Ack1

Port Log message

```
time WKA Tx_Ack1 port len c0ffffff,00ffffff,11d50001, first_word_of_payload
```

Probable cause

The well-known-address daemon received a CT frame.

Fields logged are:

- First word of FC header (R_CTL, destination address)
- Second word of FC header (CS_CTL, source address)
- Fifth word of FC header (OX_ID, RX_ID)
- First word of the payload

Recommended action

No action is required.

Severity

Info

Glossary

alias

A logical grouping of elements in a fabric. An alias is a collection of port numbers and connected devices used to simplify the entry of port numbers and WWNs when creating zones. **AL_PA**

Arbitrated loop physical address. A unique 8-bit value assigned during loop initialization to a port in an arbitrated loop.

area number

In Fabric OS 4.0 and later, ports on a switch are assigned a logical area number. Port area numbers can be viewed by issuing the `switchShow` command. They are used to define the operative port for many Fabric OS commands; for example, area numbers can be used to define the ports within an alias or zone.

CLI

Command line interface. An interface that depends entirely on the use of commands, such as through telnet or SNMP, and does not involve a GUI.

compact flash

Nonvolatile storage that is used in a manner similar to hard disk storage. It is connected to a bridging component that connects to the PCI bus of the processor.

configuration

1. A set of parameters that can be modified to fine-tune the operation of a switch. Use the `configShow` command to view the current configuration of your switch.

2. In HP Advanced Zoning, a zoning element that contains a set of zones. The configuration is the highest-level zoning element and is used to enable or disable a set of zones on the fabric. See *also* [zone configuration](#).

core PID

Core switch port identifier. This PID format supports higher port count switches and is the default mode for all Fabric OS 4.x switches. The core PID format must be set for all Fabric OS 3.x and earlier switches, if any version 4.x switch is included in a fabric. See *also* [native PID](#), [extended edge PID](#).

CSCN

Common service connection.

CSDBG

Common services debug framework.

CSMSG

Common services messaging service.

DAP

A device address: domain:areaID:AL_PA

DLS

Dynamic load-sharing. Dynamic distribution of traffic over available paths. Allows for the recomputing of routes when an Fx_Port or E_Port changes status.

domain ID

A unique identifier for all switches in a fabric; used in routing frames. Usually assigned by the principal switch, but can be assigned manually. The domain ID for an HP StorageWorks switch can be any integer between 1 and 239.

error

In the Fibre Channel industry, a missing or corrupted frame, timeout, loss of synchronization, or loss of signal (link errors).

Ethernet

Popular protocol for LANs.

EX_Port

A port that connects a router to an edge fabric. EX_Ports limit the scope of fabric services, but provide device connectivity using Fibre Channel network address translation (FC-NAT).

exchange

The highest-level Fibre Channel mechanism used for communication between N_Ports. Composed of one or more related sequences, it can work in either one or both directions.

extended edge PID

Extended edge port identifier. This PID format supports higher port count switches. The area_ID that results from a change to extended edge PID is the same as the native PID format when port numbers are less than 16. The extended edge PID format must be set on all switches in the fabric. This enables higher port count switches to operate with lower port count switches, and does not require servers to change PID binding. See also [core PID](#), [native PID](#).

Fabric Manager

An optional, licensed HP software product. Fabric Manager is a GUI that allows for fabric-wide administration and management. Switches can be treated as groups, and actions, such as firmware downloads can be performed simultaneously.

Fabric Watch

An optional, licensed HP software product. Fabric Watch can be accessed through either the command line or Advanced Web Tools, and provides the ability to set thresholds for monitoring fabric conditions.

failover

Describes the HP StorageWorks Core Switch 2/64 process of one control processor (CP) passing active status to another CP. A failover is nondisruptive.

FC-PH

The Fibre Channel physical and signaling standard for FC-0, FC-1, and FC-2 layers of the Fibre Channel Protocol. Indicates signaling used for cable plants, media types, and transmission speeds.

FCP

Fibre Channel Protocol. Mapping of protocols onto the Fibre Channel standard protocols. For example, SCSI FCP maps SCSI-3 onto Fibre Channel.

FCR

Fibre Channel router.

FC Router

A software package for the MP Router that enables two or more fabrics to share resources (such as hosts or storage devices), without merging those fabrics.

FCRP

Fibre Channel Router Protocol. The protocol used in FC-router-to-FC router communication in the backbone fabric.

FDMI

Fabric Device Management Interface. A database service provided by the fabric for Nx_Ports. The primary use is by host bus adapters (HBAs) that register information about themselves and their ports.

FIFO

First in, first out. A storage method that retrieves the item stored for the longest time.

FL_Port

Fabric loop port. A port that is able to transmit under fabric protocol and also has arbitrated loop capabilities. Can be used to connect an NL_Port to a switch.

frame

The Fibre Channel structure used to transmit data between ports. Consists of a start-of-frame delimiter, header, optional headers, data payload, cyclic redundancy check (CRC), and end-of-frame delimiter. There are two types of frames: link control frames (transmission acknowledgements and so forth) and data frames.

FRU

Field replaceable unit. A component that can be replaced on site.

FSP

Fibre Channel Service Protocol. The common protocol for all fabric services; transparent to the fabric type or topology.

FSPF

Fabric shortest path first. The HP StorageWorks routing protocol for Fibre Channel switches.

FTP

File Transfer Protocol.

gateway

Hardware that connects incompatible networks by providing translation for both hardware and software. For example, an ATM gateway can be used to connect a Fibre Channel link to an ATM connection.

GBIC

Gigabit interface converter. A removable serial transceiver module that allows gigabaud physical-level transport for Fibre Channel and Gigabit Ethernet.

HA

High availability. A set of features in HP StorageWorks switches that provides maximum reliability and nondisruptive replacement of key hardware and software modules.

HTTP

Hypertext Transfer Protocol. The standard TCP/IP transfer protocol used on the World Wide Web.

ID_ID

Insistent domain ID. A parameter of the `configure` command in the HP Fabric OS.

Insistent Domain ID Mode

Sets the domain ID of a switch as insistent, so that it remains the same over reboots, power cycles, failovers, and fabric reconfigurations.

IOCTL

I/O control.

LAN

Local area network. A network in which transmissions typically take place over fewer than 5 kilometers (3.4 miles).

LED

Light-emitting diode. A device that indicates the status of elements on a switch.

LSAN

Logical storage area network. An LSAN enables device and storage connectivity that spans two or more fabrics.

MALLOC

Memory allocation. Usually refers to buffer credits.

meta-SAN

Two or more SANs connected using Fibre Channel Routers. These SANs can share resources, but are not merged.

MIB

Management Information Base. An SNMP structure that helps with device management, providing configuration and device information.

N_Port

Node port. A port on a node that can connect to a Fibre Channel port or to another N_Port in a point-to-point connection.

native PID

Native PID format is the default port identifier scheme on HP StorageWorks 1 GB switches, SAN Switch 2/8-EL, and SAN Switch 2/16. This format does not support higher port count switches in the fabric. See also [core PID](#), [extended edge PID](#).

NR_Port

Ports that act as the source and destination of interfabric frames that traverse a Fibre Channel Router backbone fabric. NR_Ports are virtual entities presented by an Fibre Channel Router.

NS

Name Server. The service provided by a fabric switch that stores names, addresses, and attributes related to Fibre Channel objects. Can cache information for up to 15 minutes. Also known as a *Simple Name Server* or as a *directory service*.

PID

Port identifier. See also [core PID](#), [extended edge PID](#), [native PID](#).

port

In an HP StorageWorks switch environment, an SFP transceiver or GBIC receptacle on a switch to which an optic cable for another device is attached.

port address

In Fibre Channel technology, the port address is defined in hexadecimal. In the HP Fabric OS, a port address can be defined by a domain and port number combination or by area number.

port card

A hardware component that provides a platform for field-replaceable, hot-swappable ports.

port log

A record of all activity on a switch, kept in volatile memory.

port name

A user-defined alphanumeric name for a port.

port_name

The unique identifier assigned to a Fibre Channel port. Communicated during log in and port discovery.

POST

Power-on self-test. A series of tests run by a switch after it is turned on.

principal switch

The first switch to boot up in a fabric. Ensures unique domain IDs among roles.

RCS

Reliable Commit Service. Refers to HP-specific ILS command code.

RSCN

Registered state change notification. A switch function that allows notification of fabric changes to be sent from the switch to specified nodes. The fabric controller issues RSCN requests to N_Ports and NL_Ports, but only if they have registered to be notified of state changes in other N_Ports and NL_Ports. This registration is performed using the State Change Registration (SCR) Extended Link Service. An N_Port or NL_Port can issue an RSCN to the fabric controller without having completed SCR with the fabric controller.

RX

Receiving frames.

SAN

Storage area network. A network of systems and storage devices that communicate using Fibre Channel protocols.

SCSI

Small Computer Systems Interface. A parallel bus architecture and a protocol for transmitting large data blocks to a distance of 15 to 25 meters.

SFP transceiver

Small-form-factor pluggable. A transceiver used on 2-GB/sec switches that replaces the GBIC.

SFP cable

A cable specifically designed for use with an SFP transceiver. Not compatible with GBICs.

Simple Name Server (SNS)

A switch service that stores names, addresses, and attributes for up to 15 minutes and provides them as required to other devices in the fabric. SNS is defined by Fibre Channel standards and exists at a well-known address. Also known as a *directory service* or a *Name Server*.

SNMP

Simple Network Management Protocol. An Internet management protocol that uses either IP for network-level functions and UDP for transport-level functions, or TCP/IP for both. Can be made available over other protocols, such as UDP/IP, because it does not rely on the underlying communication protocols.

SNS

See [Simple Name Server \(SNS\)](#).

soft zone

A zone consisting of zone members that are made visible to each other through client service requests. Typically, soft zones contain zone members that are visible to devices using Name Server exposure of zone members. The fabric does not enforce a soft zone. Note that well-known addresses are implicitly included in every zone.

switch

A fabric device providing bandwidth and high-speed routing of data using link-level addressing.

switch name

The arbitrary name assigned to a switch.

switch port

A port on a switch. Switch ports can be E_Ports, F_Ports, or FL_Ports. See also [FL_Port](#).

syslog

Syslog daemon. Used to forward error messages.

TC

Track changes.

telnet

A virtual terminal emulation used with TCP/IP. Telnet is sometimes used as a synonym for the HP Fabric OS CLI.

track changes

An HP Fabric OS feature that can be enabled to report specific activities (for example, logins, logouts, and configuration task changes). The output from the track-changes feature is dumped to the error log for the switch.

transceiver

A device that converts one form of signaling to another for transmission and reception; in fiber optics, the conversion is from optical to electrical.

translate domain

A router virtual domain that represents an entire fabric. Device connectivity can be achieved from one fabric to another, over the router and through this virtual domain, without merging the two fabrics. Also known as *phantom domain*.

trap (SNMP)

The message sent by an SNMP agent to inform the SNMP management station of a critical error. See also [SNMP](#).

trunking

In Fibre Channel technology, a feature that enables distribution of traffic over the combined bandwidth of up to four ISLs between adjacent switches, while preserving in-order delivery.

trunking group

A set of up to four trunked ISLs for HP StorageWorks SAN Switch 2/8-EL, SAN Switch 2/8V, SAN Switch 2/16, SAN Switch 2/16V, SAN Switch 2/32, Core Switch 2/64, and SAN Director 2/128; up to eight for SAN Switch 4/32.

trunking ports

The ports in a set of trunked ISLs.

TX

Transmit.

well-known address

In Fibre Channel technology, a logical address defined by Fibre Channel standards as assigned to a specific function and stored on the switch.

WWN

World wide name. An identifier that is unique world-wide. Each entity in a fabric has a separate WWN.

zone

A set of devices and hosts attached to the same fabric and configured as being in the same zone. Devices and hosts within the same zone have access to others in the zone but are not visible to any outside the zone.

zone configuration

A specified set of zones. Enabling a configuration enables all zones in that configuration.

zoning

A feature in fabric switches or hubs that allows segmentation of a node by physical port, name, or address.

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